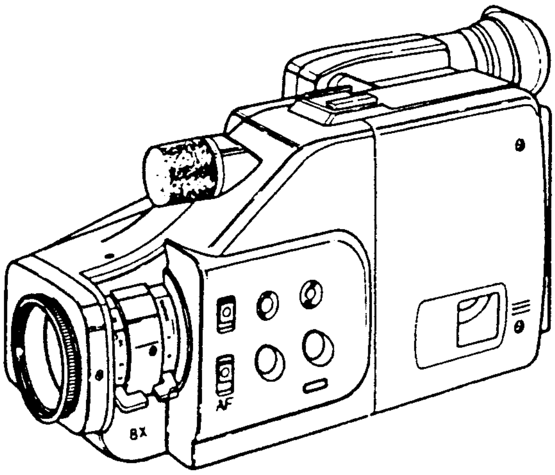
Service Manual

ORION

VIDEO MOVIE

VMC 980



VHS C
PAL

HQ
HIGH QUALITY

CCD
CHARGE COUPLED DEVICE

AF AUTO FOCUS

Chassis Code:

A

Bestell-Nr.:

4961

Änderungen vorbehalten!

Printed in Germany

SPECIFICATIONS

Format: VHS-C
Power source: DC 6.0V
Power consumption: Approx. 5.5 watts
Signal system: PAL color system
Video recording system: 4 rotary heads, sequential helical scanning system
Luminance: FM azimuth recording
Color signal: converted subcarrier phase shift recording
Audio track: 1 track
Cassette tape: VHS-C Cassette
Tape speed: SP: 23.39 mm/sec.
LP: 11.69 mm/sec.
Recording time max.: SP: 45 minutes (with EC-45 cassette)
LP: 90 minutes (with EC-45 cassette)
Video signal: Output Level 1 Vp-p/75 ohm
Audio signal: Output Level -6 dB/1K ohm
Image device: 1/3" CCD
Minimum required illumination: 6 lux (at F1.8)
Illumination range: 7-100,000 lux
Lens: F1.8, f=6.7～54 mm, 8:1 power zoom lens with auto iris control and macro position, filter diameter 37 mm
High-speed shutter: 1/60, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec
Viewfinder: Electronic viewfinder with 0.6" black/white CRT
White balance adjustment: Full-auto/preset standard
Operating temperature: 0°C～40°C
Storage temperature: -20°C～60°C
Weight: 1.05 Kg
Dimensions: 113(W)x123(H)x228(D) mm

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HQ
This video movie is equipped with HQ (High Quality) recording capability.

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF CASSETTE LID (See Fig. 1)

a. Remove the 2 screws ①.
b. Remove the CASSETTE LID in the direction of arrow Ⓐ.

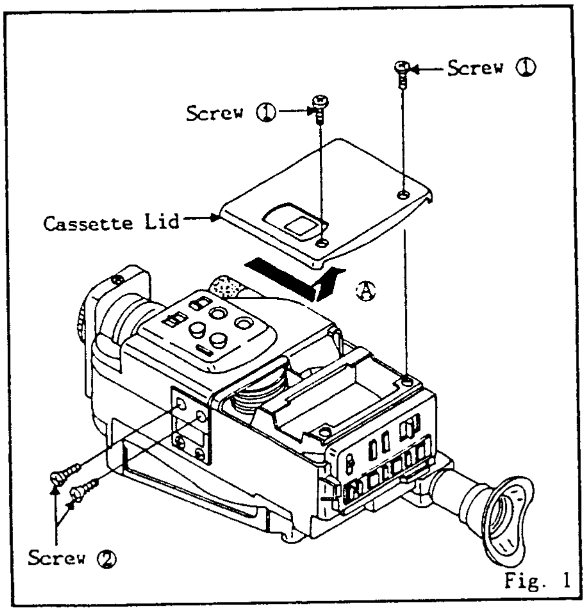

Screw ①
Screw ①
Cassette Lid
Ⓐ
Screw ②

Fig. 1

2. REMOVAL OF SIDE CABINET (See Fig. 1 and 2)

a. Remove the screw ①.
b. Remove the SHOES SPRING.
c. Remove the screw ②.
d. Turn the HOOD LENS in the direction of arrow Ⓐ.
e. Remove the SIDE CABINET in the direction of arrow Ⓑ.
f. Remove the 2 screws ③.
g. Remove the AF COVER.
h. Remove the screw ④.
i. Remove the 2 screws ②. (See fig. 1)
j. Disconnect the following connector. (CP1203 8 pin)

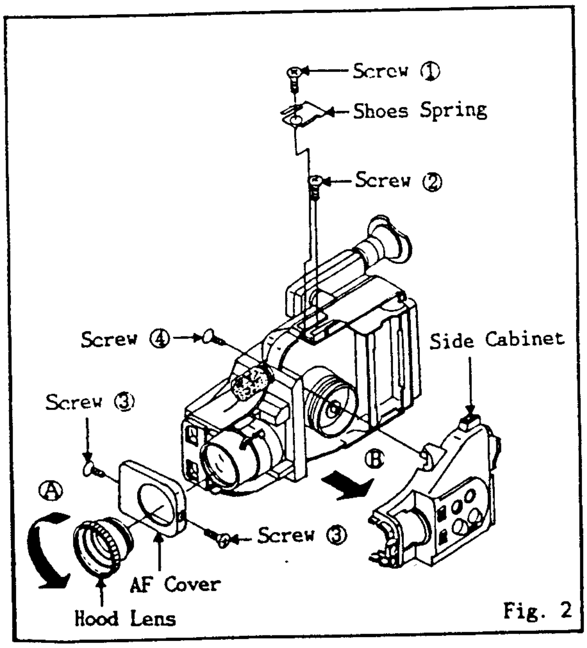

Screw ①
Shoes Spring
Screw ②
Screw ④
Side Cabinet
Screw ③
Ⓐ
Ⓑ
Screw ③
AF Cover
Hood Lens

Fig. 2

3. REMOVAL OF BATTERY BASE AND VIDEO LENS. (See Fig. 3 and 4)

a. Remove the 5 screws ①.
b. Disconnect the following connectors. (CP1102 3 pin, CP4204 5 pin)
c. Remove the BATTERY BASE.
d. Remove the 3 screws ②.
e. Disconnect 10 pin and 11 pin connectors on the VIDEO LENS.
f. Remove the screw ④. (See fig. 4)
g. Remove the LENS BLOCK.

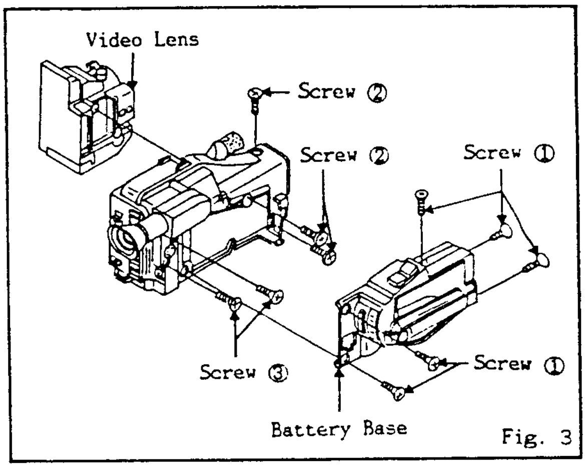

Video Lens
Screw ②
Screw ②
Screw ①
Screw ③
Screw ①
Battery Base

Fig. 3

4. REMOVAL OF DECK BLOCK AND VIEW FINDER ASS'Y (See Fig. 3 and 4)

a. Remove the 4 screws ①.
b. Remove the 2 screws ③. (See fig. 3)
c. Remove the 3 screws ②.
d. Disconnect the following connectors. (CP4205 5 pin, CP5003 2 pin)
e. Remove the DECK BLOCK in the direction of arrow Ⓐ.
f. Remove the 2 screws ③.
g. Remove the VIEW FINDER ASS'Y.

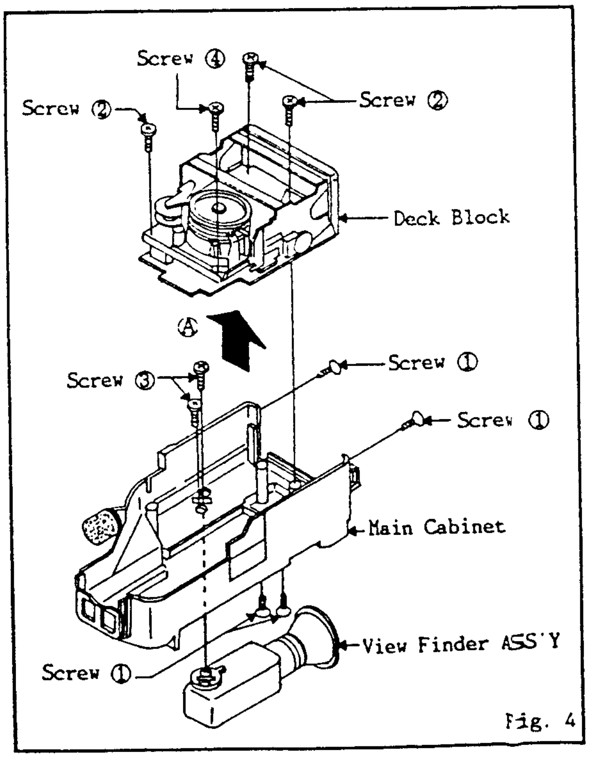

Screw ④
Screw ②
Screw ②
Deck Block
Ⓐ
Screw ①
Screw ③
Screw ①
Main Cabinet
View Finder ASS'Y
Screw ①

Fig. 4

DISASSEMBLY INSTRUCTIONS

5. REMOVAL OF MDA, MAIN AND Y/C PCB (See Fig. 5)

a. Disconnect the 2 connectors Ⓐ.
b. Remove the Y/C PCB in the direction of arrow Ⓐ.
c. Disconnect the 3 connectors Ⓑ.
d. Disconnect the following connectors and earth lug. (CP5001 2 pin, CP5002 7 pin)
e. Remove the MAIN PCB in the direction of arrow Ⓑ.
f. Remove the 3 screws ①.
g. Remove the screw ②.
h. Remove the MDA PCB.

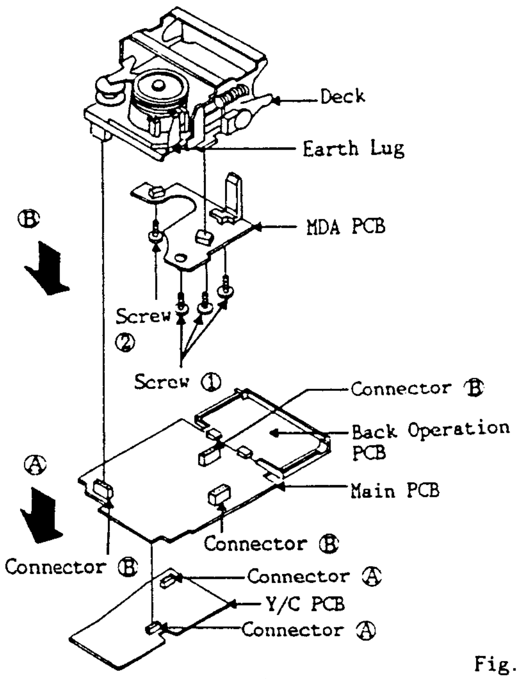

Deck
Earth Lug
Ⓑ
MDA PCB
Screw ②
Screw ①
Connector Ⓑ
Back Operation PCB
Ⓐ
Main PCB
Connector Ⓑ
Connector Ⓑ
Connector Ⓐ
Y/C PCB
Connector Ⓐ

Fig. 5

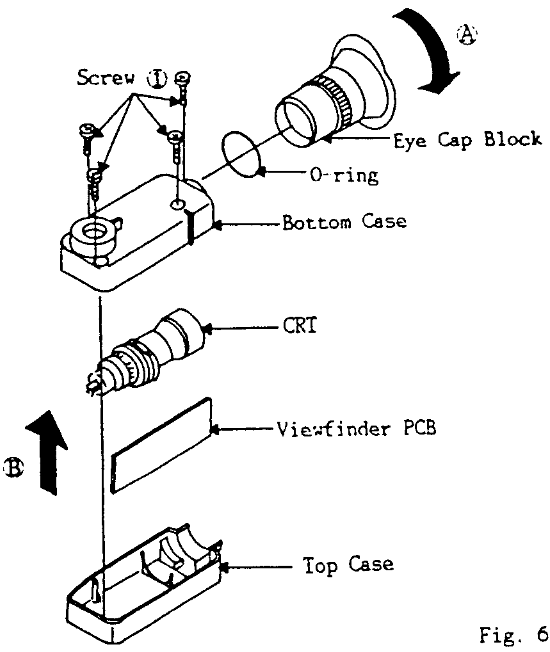

Ⓐ
Screw ①
Eye Cap Block
O-ring
Bottom Case
CRT
Ⓑ
Viewfinder PCB
Top Case

Fig. 6

6. REMOVAL OF VIEWFINDER PCB AND CRT (See Fig. 6)

a. Remove the EYE CAP BLOCK in the direction of arrow Ⓐ.
b. Remove the O-RING.
c. Remove the 4 screws ①.
d. Remove the BOTTOM CASE in the direction of arrow Ⓑ.
e. Remove the CRT and VIEWFINDER PCB in the direction of arrow Ⓑ.
f. Disconnect the following connectors. (CP402, CP403 and CRT SOCKET)
g. Remove the CRT.

SAFETY MODES

1. Supply and Take-up reel

Symptom: 'EMG: TUP' will appear in the viewfinder.
Trouble: Absence of reel pulse (at least on one side of Supply side or Take-up side for 5 second during PLAY and REC mode.)
Absence of reel pulse (at least on one side of Supply side or Take-up side for 2 second during CUE mode.)
To cancel operation: Turn the POWER SW off.
Leave the unit for 5 minutes.

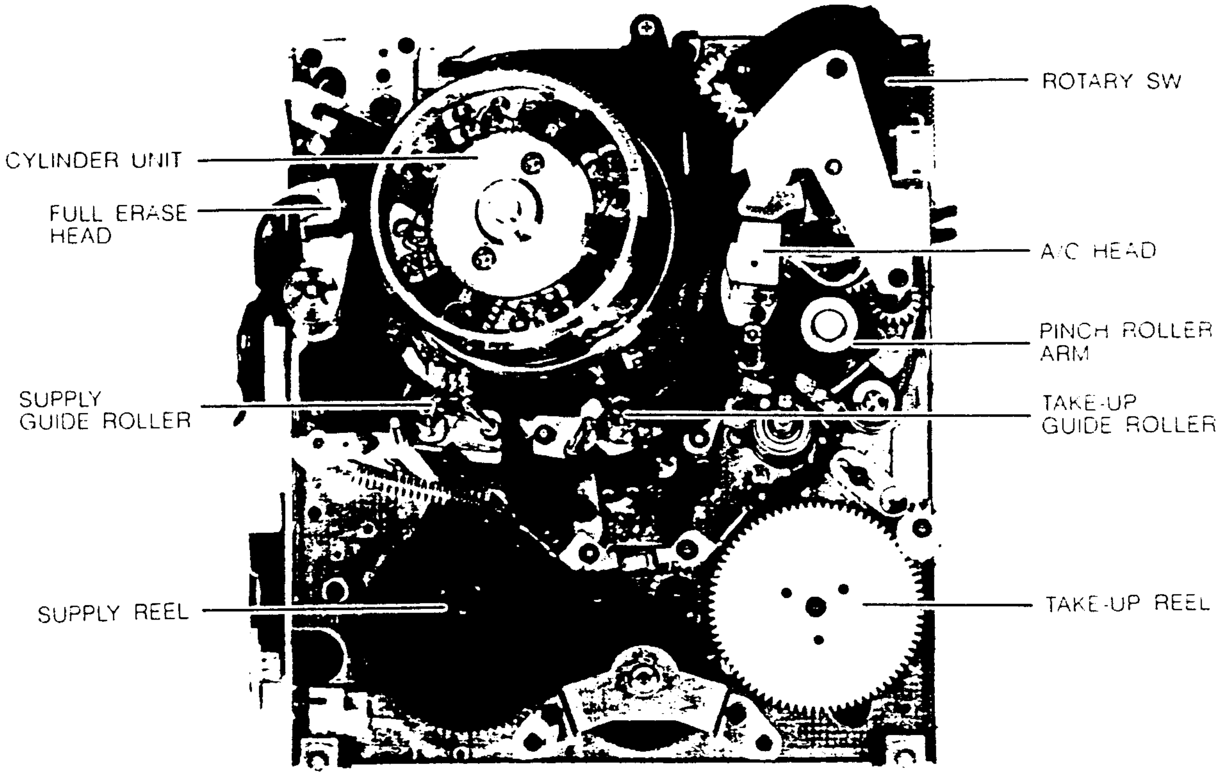
2. Loading and Unloading

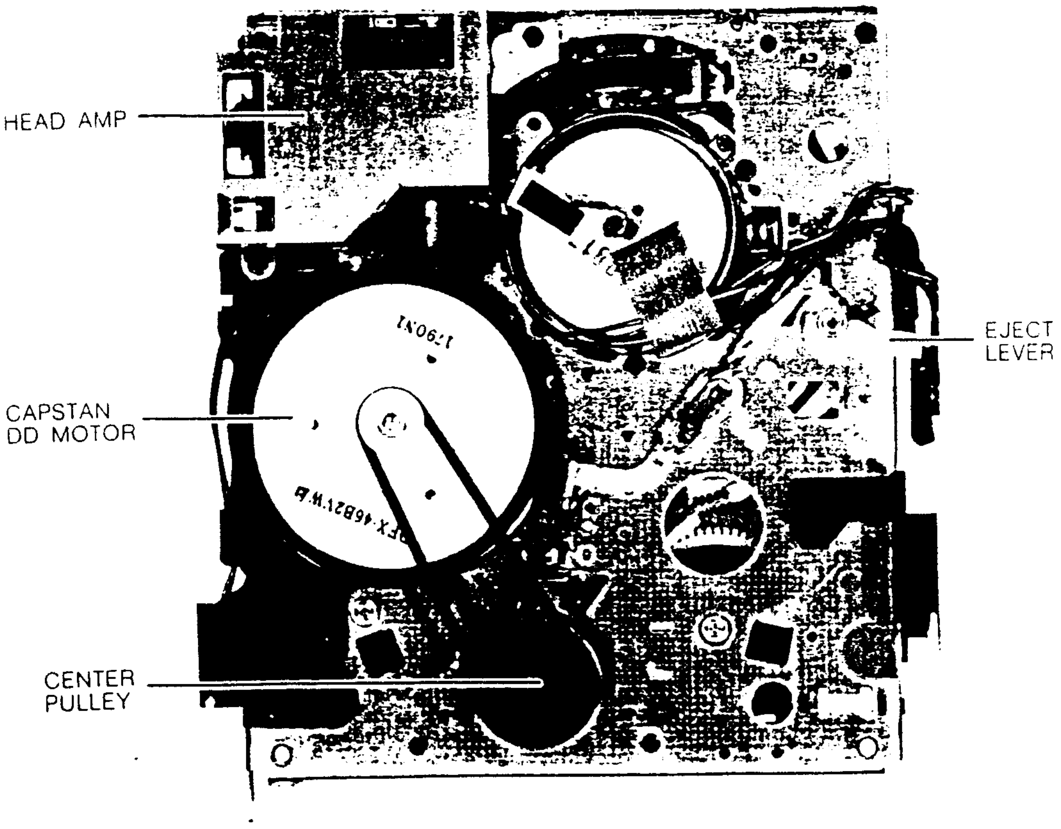
Symptom: 'EMG: LDM' will appear in the viewfinder.
(The position is the same as STBY or REC.)
Trouble: The mode switch doesn't operate even if the loading motor runs for more than 10 seconds.
Corrective action: Stop the loading motor.
To cancel operation: Turn the POWER SW off.
Leave the unit for 5 minutes.

3. Cylinder

Symptom: 'EMG: CYL' will appear in the viewfinder.
Trouble: Absence of FF 25Hz for the cylinder for 2 seconds.
To cancel operation: Turn the POWER SW off.
Leave the unit for 5 minutes.

DECK PARTS LOCATION


ROTARY SW
CYLINDER UNIT
FULL ERASE HEAD
A/C HEAD
PINCH ROLLER ARM
SUPPLY GUIDE ROLLER
TAKE-UP GUIDE ROLLER
SUPPLY REEL
TAKE-UP REEL


HEAD AMP
EJECT LEVER
CAPSTAN DD MOTOR
CENTER PULLEY

MECHANICAL ADJUSTMENTS

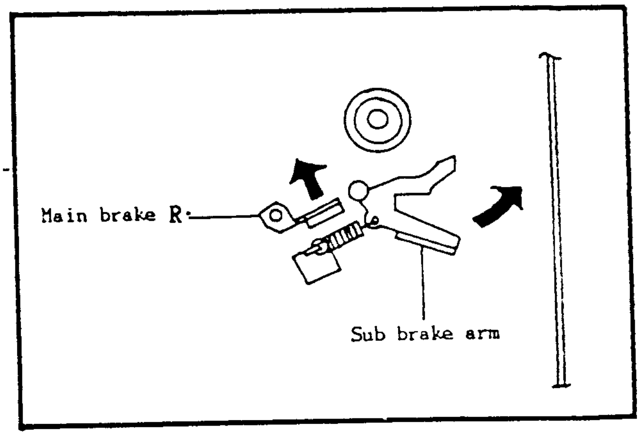
1. BEFORE MAKING MECHNICAL ADJUSTMENT

1. This section describes procedures to replace mechanism parts which have aged and been worn as well as for parts replacement resulting from accidental troubles.
2. As most mechanical adjustments have close relation to electrical adjustments, pay enough attention to adjusting the mechanism in consideration of that it is the base of electrical adjustments.

Test equipment required:
Oscilloscope: Wide-band, dual trace,
triggered, delayed sweep.
Alignement tape

1-1: DECK PARTS REPLACEMENT

1. Remove the earth lug. (1 screw)
2. Slide the eject lever in the direction of the arrow (**Fig. 2-c**) and lift the STAGE up. Then pull the STAGE unit in the direction towards you and remove. (2 screws)
3. Remove the arm lock 2. (2 screws)
4. Remove the rotary switch.
5. Slide the lock arm lever and SB rod in the direction of the arrow (**Fig. 2-d**) and remove the cam gear.
6. Slide the F-S gear in the direction of the arrow (**Fig. 2-f**) and remove the deck plate. (3 screws)
7. Remove the polyslider washer on the middle post, slide it in the direction of the arrow and remove it. (**Fig. 2-f**)
8. Remove the pinch roller actuator spring on the main deck and then remove the polyslider washer.
   Remove the pinch roller arm from the actuator, then remove the E-ring.
9. Remove the loading motor. (2 screws)
10. Remove the cylinder wire that is on the back of the main deck on the connector of the MDA PCB and separate the cylinder unit. (**CAUTION:** Do not drop or damage the cylinder unit.)
11. Remove 3 screws.
    Remove the motor cover and the belt, then separate the capstan DD motor.
    Remove the MDA PCB. (4 screws)
12. Remove the tension servo spring.
    Remove the tension servo while lifting up the tension arm.
    (The tension lever cap is removed simultaneously)
13. Remove the end sensor holder. (1 screw)
14. Remove the nut and impedance roller and FE head arm.
15. Remove 4 screws.
    Lift the UV base and remove it.
16. Remove the polyslider washer that is on the T-inclined base. (3 screws)
    Take off the hooks (2 positions) of the T-inclined base, lift it up and then remove it.
17. Remove the holding gear C. (1 screw)
    Lift the S-ring gear up and then remove the S-ring from a hook of the holding gear A.
18. Remove the guide gear S (1 polyslider washer) and then lift the guide gear S and remove it.
19. Slide the main brake L. (**Fig. 2-b**)
    Remove the S reel gear. (1 polyslider washer)
20. Remove the center pulley. (2 screws)
21. Remove the T reel gear. (1 polyslider washer)
    (**CAUTION:** Slide the sub brake arm and main brake R in the direction of the arrow. Install or remove the T roller gear.) (**See the following figure**)



When replacing parts shown below in sections 2 and 3 follow the numbered steps indicated in the heading. These steps are detailed on the previous page.

2. UPPER DRUM REPLACEMENT

(DECK PARTS REPLACEMENT NO. ①, ⑩)

1. Unsolder the drum pins extending through the upper drum board (8 locations) and take out two screws. Remove the upper drum board. (**Refer to Fig. 1-a**)
2. If the upper drum is difficult to remove, use the upper drum fixing jig (JG040), see **Fig. 1-b**. When installing the upper drum preheat the upper drum to approximately 50°C by using a hair dryer.
3. When setting the new drum in place, align the brown colored pins with the red wires of the lower drum, as indicated in **Fig. 1-a**.
4. After replacing the upper drum, check and adjust the FM waveform (**Refer to Item 5**).

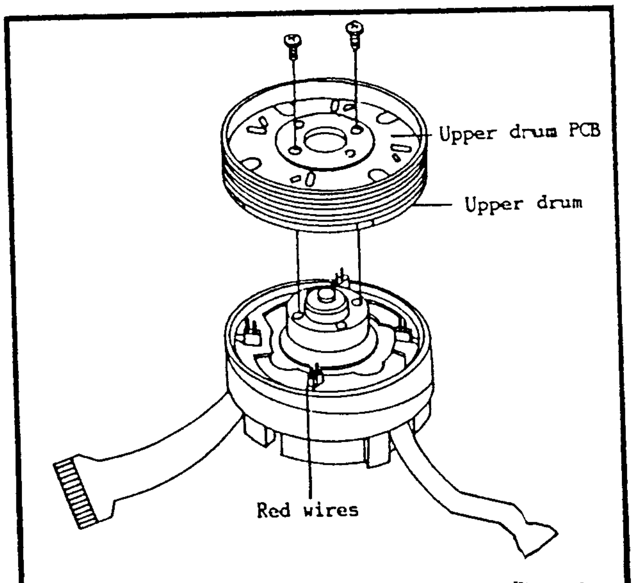


Fig. 1-a

MECHANICAL ADJUSTMENTS

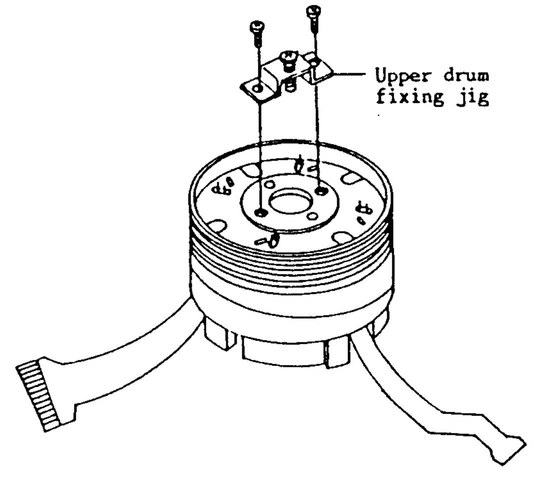

Upper drum
fixing jig

Fig. 1-b

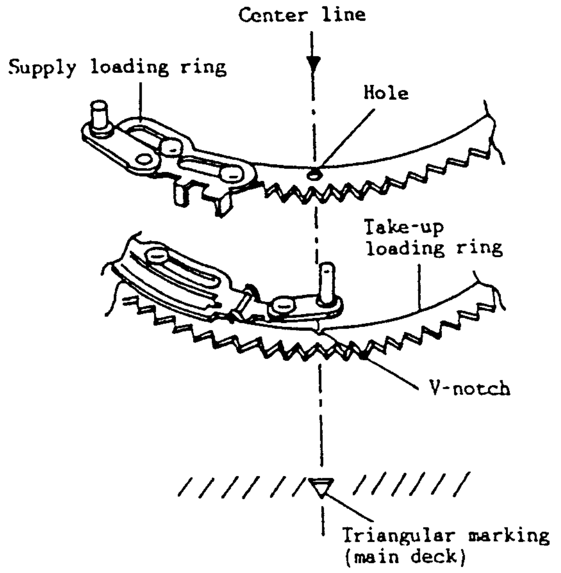

Center line
Supply loading ring
Hole
Take-up
loading ring
V-notch
Triangular marking
(main deck)

Fig. 2-a

3. CHECKS AND ADJUSTMENTS

(DECK PARTS REPLACEMENT NO. ①~⑬, ⑮~⑱)

Perform the following position checks after replacing or disturbing the affected parts.

3-1: LOADING RINGS, TERMINAL GEAR AND LOADING GEAR A

When replacing or removing the loading rings, first align them at the mechanical Stop mode position as shown in **Fig. 2-a.**

1. Temporarily remove the worm gear of the loading motor bracket assembly.
   Turn the take-up and supply loading rings in the unloading direction.
2. As viewed from the top of the deck, adjust so that the hole and V-notch of the rings are positioned above the triangular marking of the main deck. **(Refer to Fig. 2-a)**
3. Adjust the hole of the terminal gear with the hole of the main deck as indicated in **Fig. 2-b.** Then adjust the hole of the loading gear A with the hole of the main deck as indicated in **Fig. 2-b.**
   When adjusting the loading ring positions, press the eject lever on the rear of the deck toward the reel. **(Refer to Fig. 2-c)**
   This eject lever will not function correctly if its position deviates.
4. Adjust the marked position of the cam gear with the center of the terminal gear shaft, as indicated in **Fig. 2-d.**
   This is the Stop position.

IMPORTANT: If the adjustment at **3-1** has misaligned slightly, normal functions may not operate. Adjust the alignment at **3-1** more carefully.

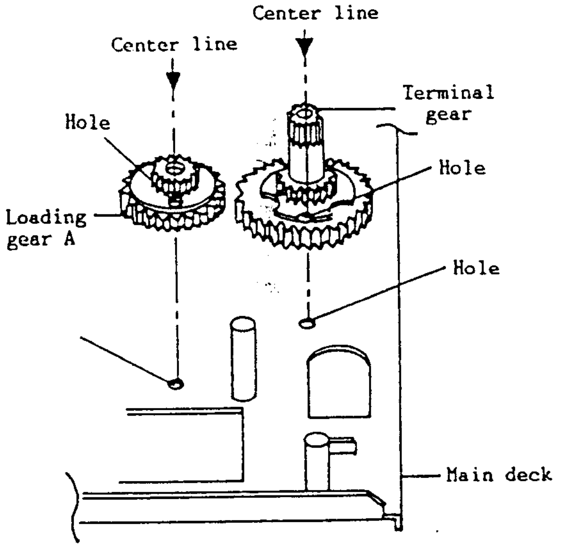

Center line
Center line
Terminal
gear
Hole
Hole
Loading
gear A
Hole
Main deck

Fig. 2-b

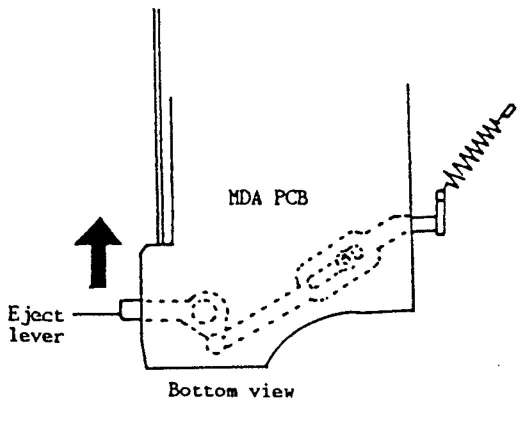

MDA PCB
Eject
lever
Bottom view

Fig. 2-c

MECHANICAL ADJUSTMENTS

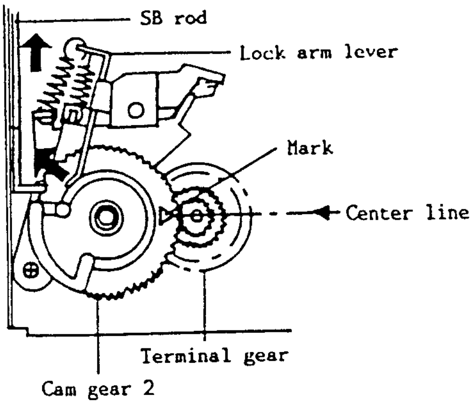


Fig. 2-d

3-2: ROTARY SWITCH

In the Stop Mode, the rotary switch setting is as indicated in **Fig. 2-e.**

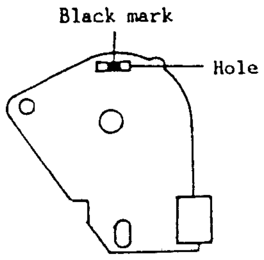


Fig. 2-e

3-3: MIDDLE POLE

In the Stop mode, the F-S gear hole and middle pole arm projection are aligned, as indicated in **Fig. 2-f.**

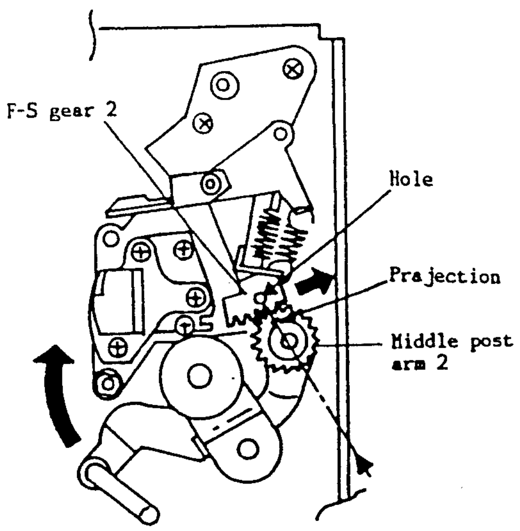


Fig. 2-f

3-4: BACK TENSION ADJUSTMENT

Adjust the back tension torque range from 18～28g.cm with the torque cassette (**JG041**). (When the back tension torque range changes, it takes the center torque value with it.)

CAUTION: To increase the back tension torque, turn the screw ① clockwise. To decrease the back tension torque, turn the screw ① counter-clockwise. (**Refer to Fig. 2-g**)

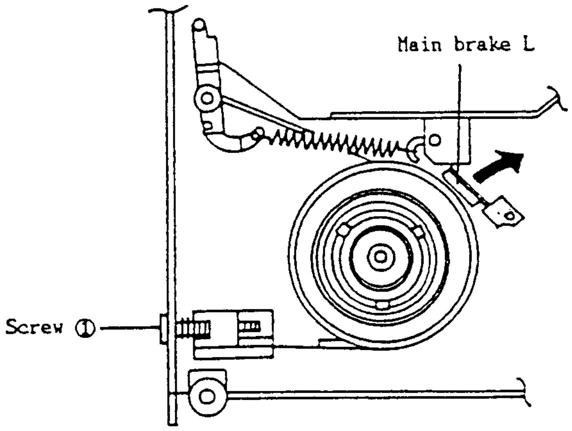


Fig. 2-g

4. TAPE TRANSPORT CHECKS AND ADJUSTMENTS

NOTE: The tape transport has been adjusted at the factory and ordinarily does not require readjustment. After extensive use or if parts affecting the transport have been replaced, perform the following checks and adjustments. Use care not to disturb settings unnecessarily.

4-1: GUIDE ROLLERS

1. Perform these adjustments carefully, since they affect interchangeability.
2. Use a spare cassette (not Alignment tape) and while tape is running, adjust the supply side guide roller height with a metric (1.4 mm) hex. wrench for smooth tape transport at the drum intake and along the drum lead.
3. In the same manner, adjust the take-up guide roller for the output side.

4-2: IMPEDANCE ROLLERS

NOTE: Avoid disturbing these settings, since they form the reference for the other transport system adjustments. The nut atop the roller is for securing, not for adjustment.

For reference, the supply side relationships are indicated in **Fig. 3-a.**

MECHANICAL ADJUSTMENTS

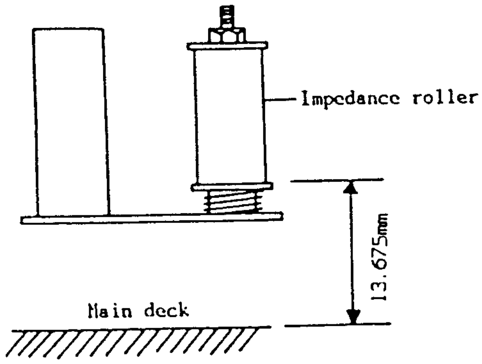


Fig. 3-a

4-3: AUDIO/CONTROL HEAD
(Take-up guide poles)

NOTE: Proper adjustment of the audio/control head is essential for interchangeability.

1. After adjusting the take-up guide roller, refer to **Fig. 3-b** and use a cross-head screwdriver to adjust the audio/control head inclination with the screw ①. Adjust for smooth transport at the take-up guide pole flange.
2. One method of adjusting is to first turn the screw ① counterclockwise to where tape wrinkling occurs at the bottom of the take-up guide pole. Then carefully turn the screw clockwise to eliminate wrinkling.
3. Audio/control head azimuth and height are adjusted as part of the interchangeability adjustment steps.

IMPORTANT: Do not disturb the settings of the take-up guide poles. These have been precision adjusted at the factory.

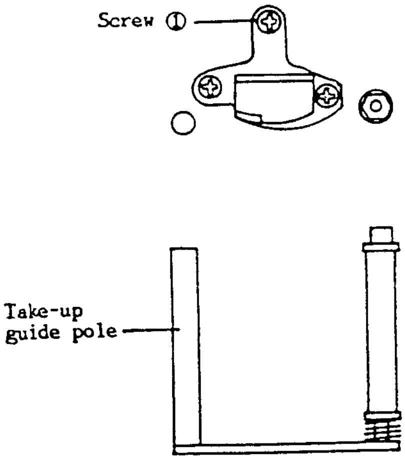


Fig. 3-b

5. INTERCHANGEABILITY CHECKS AND ADJUSTMENTS

IMPORTANT: Before using costly alignment tape, first use a spare cassette and confirm proper transport motion without damage to the tape.

5-1: FM WAVEFORM

Use the stairstep signal of alignment tape (JG042) to check and adjust the FM signal.

1. Play the stairstep signal of the alignment tape (JG042) and adjust the TRACKING control for maximum FM waveform. Refer to **Fig. 4-a** and confirm the relationships for the maximum output (a), minimum output at waveform center (b), minimum output at drum intake (c) and minimum output at drum output (d).
2. In addition to meeting the above specifications, overall variation of the tracking may cause large drops in level or increase noise.
3. Operate the TRACKING control to vary the FM waveform from maximum to minimum, and from minimum to maximum. Confirm that the waveform varies evenly at the drum intake portion. As illustrated in **Fig. 4-b**, if the slope varies from outward to inward, or from inward to outward, the supply guide roller height adjustment is incorrect. Adjust the height so that the tape travels properly in the drum lead and the waveform variation becomes nearly parallel.
4. Similarly, observe the variation at the drum output portion. Adjust the take-up guide roller height for parallel waveform variation. **(Refer to Fig. 4-c)**
5. Operate the TRACKING control and observe variation of the overall FM waveform. Fine adjust the supply and take-up guide poles so that variation is parallel and linear.
6. Confirm absence of tape wrinkling or curling at the impedance rollers and take-up guide pole. If curling or wrinkling is observed at the supply side impedance roller, carefully fine-adjust (lower) the impedance roller. If curling or wrinkling is observed at the take-up guide pole, readjust the audio/control head inclination for smooth tape travel at the lower flange of the guide pole.
   Afterwards, check the FM waveform again.

$$\frac{b}{a} \geqq 0.8 \quad \frac{c}{a} \geqq 0.7 \quad \frac{d}{a} \geqq 0.7$$

(Video FM waveform specifications)

MECHANICAL ADJUSTMENTS

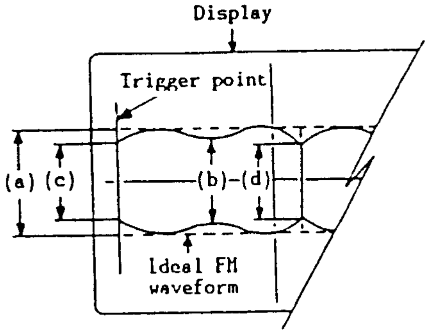

Display
Trigger point
(a)
(c)
(b)-(d)
Ideal FM waveform

Fig. 4-a

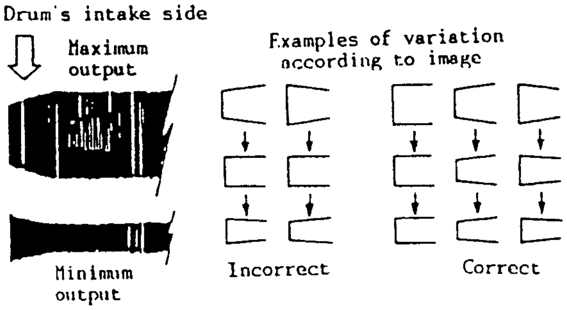

Drum's intake side
Maximum output
Examples of variation according to image
Minimum output
Incorrect
Correct

Fig. 4-b

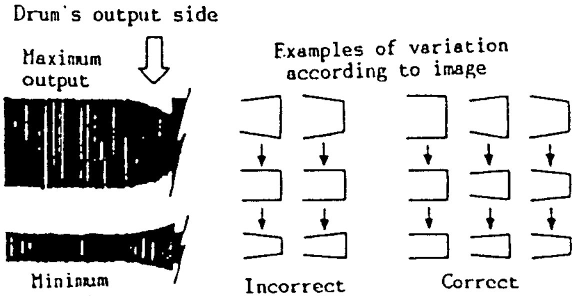

Drum's output side
Maximum output
Examples of variation according to image
Minimum output
Incorrect
Correct

Fig. 4-c

5-2: AUDIO/CONTROL HEAD ADJUSTMENT

Since this is a record-only unit, all tapes made with this unit are played back on another deck. Therefore, the audio/control head must be correctly adjusted in order to ensure adequate audio output and S/N, in addition to correct pick up of the control signal for servo operation.

1. Play stairstep (audio 6 KHz) section of the alignment tape (JG042).
2. Refer to **Fig. 4-d**. Turn the screw ③ for maximum audio output.
3. Turn the screws ①, ② and ③ by small (about 45°) and equal increments to adjust the head height for maximum audio output. **(Refer to Fig. 4-e)**

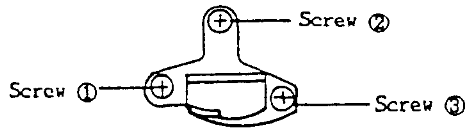

Screw ②
Screw ①
Screw ③

Fig. 4-d

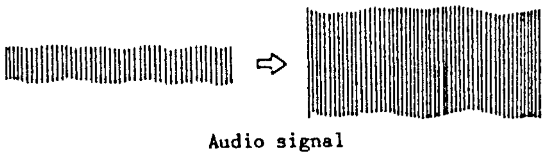

Audio signal

Fig. 4-e

5-3: CONTROL HEAD PHASE (X value)

This affects the playback synchronization between sound and picture. It is more delicate in the LP mode than the SP mode.

1. Play the stairstep signal of the alignment tape (JG042).
2. Slightly loosen the screws ④ and ⑤ of the audio/control head. Insert prong Ⓑ of the X-adjustment driver (JG044) into the hole Ⓑ and the other prong Ⓐ into the notch Ⓐ. Then twist to shift the head fully toward the capstan direction.
3. While observing the CH-1 FM waveform, carefully shift the head in the opposite direction to capstan direction (**Refer to the arrow in the Fig. 4-f**) and position. Set to the maximum peak. Then tighten screws ④ and ⑤.
4. Check again for maximum FM waveform.

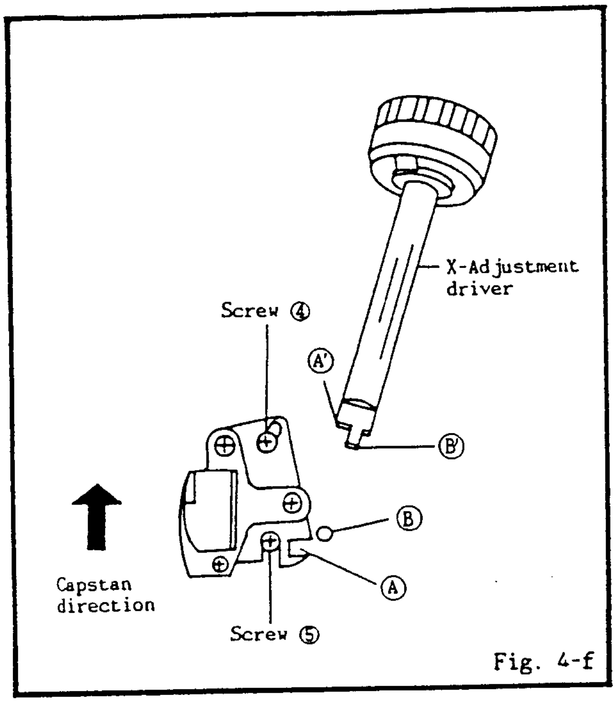

X-Adjustment driver
Screw ④
Ⓐ'
Ⓑ'
Ⓑ
Ⓐ
Capstan direction
Screw ⑤

Fig. 4-f

6. FINAL CHECKS

1. Record a signal and confirm that playback FM waveform meets the criteria of Fig. 4-a.
2. Perform checks and adjustments as described in the Electrical Adjustments Section.

ELECTRICAL ADJUSTMENTS

1. DECK SECTION

PREPARATION

Electrical adjustments are generally necessary after replacing worn mechanical parts or video heads because of interrelationship between those parts and various electrical circuits. In the event of electrical malfunction, first troubleshoot with the aid of proper test instruments, and then, commence necessary repair, replacement, and adjustment, etc.

Test instruments

1. Oscilloscope
2. Spectrum analyzer
3. DC power supply
4. DC voltmeter
5. AC voltmeter
6. Character generator

1-1: POWER CONTROL 5V

CONDITIONS

MODE - STOP
Input signal - PAL color bar

INSTRUCTIONS

1. Connect the adjustment jig PCB (**JG065**) to the CP3003 and CP5005, input the PAL color bar signal.
2. Connect the DC voltmeter to **TP2501** and **TP2003**. (GND)
3. Adjust the voltage to 4.97±0.01V with **VR2502**.

1-2: CHARACTER GENERATOR HORIZONTAL POSITION

CONDITIONS

MODE - STOP
Input signal - NTSC color bar

INSTRUCTIONS

1. Connect the adjustment jig PCB (**JG065**) to the CP3003 and CP5005, input the PAL color bar signal.
2. Have the color bar on a monitor.
3. Adjust **TC1001** until right edge of the last two digits in the center indication comes the border line between yellow and cyan as shown in **Fig. 1-1**.

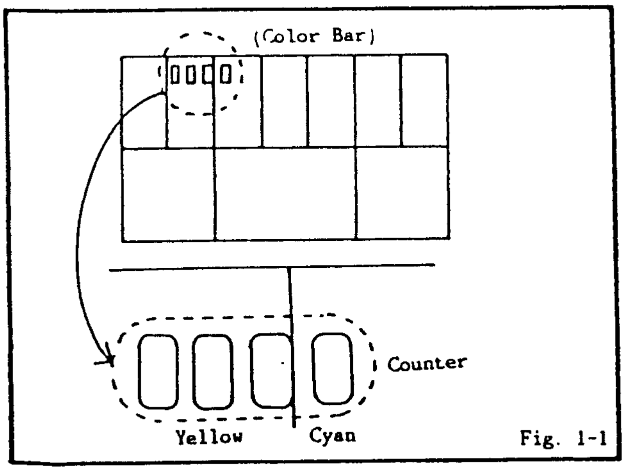


Fig. 1-1

1-3: PB. SWITCHING POSITION

CONDITIONS

MODE - PLAYBACK
Input signal - Standard test tape

NOTE: Tracking control should be set at click point.

INSTRUCTIONS

1. Connect CH-1 on the oscilloscope to **TP2002** and connect CH-2 on the oscilloscope to **TP3006**.
2. Adjust **VR2002** so that the waveform of the oscilloscope measures 6.5±0.5(H) at both leading and trailing edges. **(Refer to Fig. 1-2-a, b)**

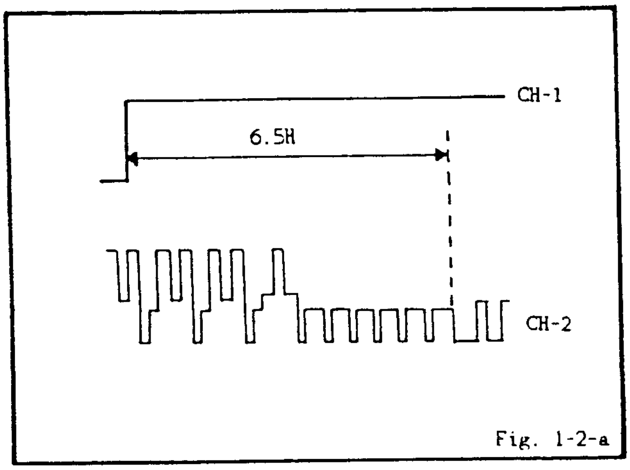


Fig. 1-2-a

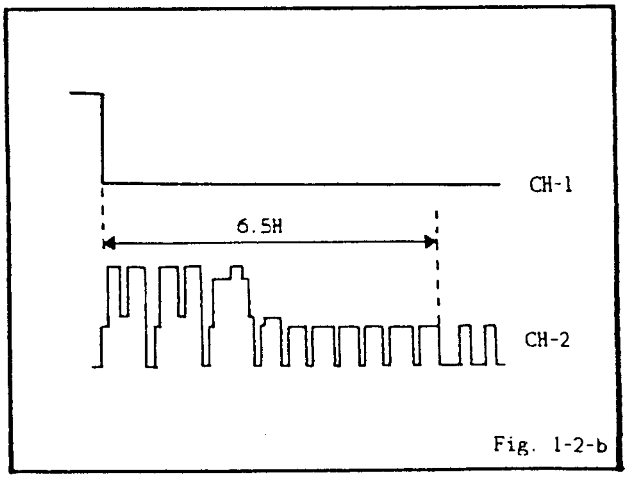


Fig. 1-2-b

1-4: TRACKING FIX

CONDITIONS

MODE - PLAYBACK
Input signal - Standard test tape

NOTE: Tracking control should be set at click point.
Turn the tracking control to the direction of maximum, then adjust it to the click point while turning back the tracking control to decrease the rocking at click point.

INSTRUCTIONS

1. Connect CH-1 on the oscilloscope to **TP2002** and connect CH-2 on the oscilloscope to **TP2001**.
2. Adjust **VR2001** so that the "T" portion measures 0.45±0.15msec as shown in **Fig. 1-3**.

ELECTRICAL ADJUSTMENTS

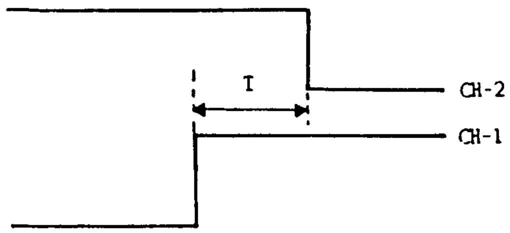


Fig. 1-3

1-5: VCO

CONDITIONS

MODE - STOP
Input signal - PAL color bar

INSTRUCTIONS

1. Connect the adjustment jig PCB (**JG065**) to the **CP3003**, and input the PAL color bar signal.
2. Connect the DC voltmeter to **TP3008**.
3. Adjust the voltage to 2.5±0.2V with **PF3001**.

1-6: E-E LEVEL

CONDITIONS

MODE - STOP
Input signal - PAL color bar

NOTE: Video out of the unit should be terminated with a 75 ohm load.

INSTRUCTIONS

1. Connect the adjustment jig PCB (**JG065**) to the CP3003 and CP5005, input the PAL color bar signal.
2. Connect the oscilloscope to **TP3001**.
3. Adjust **VR3001** so that the waveform measures 2.0±0.05Vp-p as shown in **Fig. 1-4**.

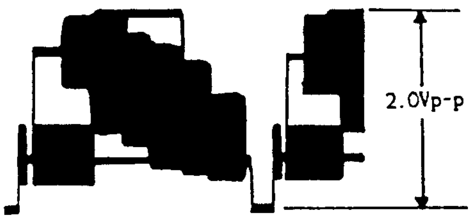


Fig. 1-4

1-7: REC LEVEL

CONDITIONS

MODE - STOP
Input signal - PAL color bar

INSTRUCTIONS

1. Connect the adjustment jig PCB (**JG065**) to the CP3003 and CP5005, input the PAL color bar signal.
2. Connect CH-1 on the oscilloscope to **TP3006** and connect CH-2 on the oscilloscope to **TP3002**.
3. Adjust **VR3003** so that the waveform measures 310±5mVp-p as shown in **Fig. 2-5**.

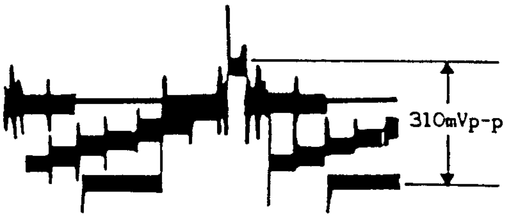


Fig. 1-5

1-8: CARRIER AND DEVIATION

CONDITIONS

MODE - RECORD
Input signal - PAL color bar

INSTRUCTIONS

1. Connect the adjustment jig PCB (**JG065**) to the CP3003 and CP5005, input the PAL color bar signal.
2. Connect **TP3004** to the input terminal on the spectrum analyzer, then adjust 3.8MHz and 4.8MHz as shown in **Fig. 1-6** with **VR3005** and **VR3004**.

VR3005 (CARRIER)
VR3004 (DEVIATION)

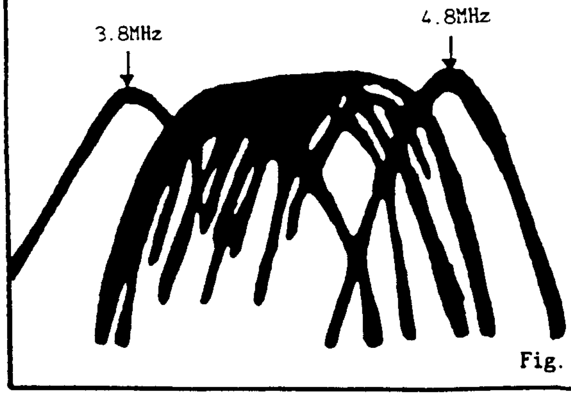


Fig. 1-6

ELECTRICAL ADJUSTMENTS

1-9: PLAYBACK LUMINANCE LEVEL

CONDITIONS

MODE - PLAYBACK
Input signal - Color bar test tape

NOTE: Video out of the unit should be terminated with a 75 ohm load.

INSTRUCTIONS

1. Connect the oscilloscope to **TP3006**.
2. Adjust **VR3002** so that the signal becomes 1.0±0.05V as shown in **Fig. 1-7**.

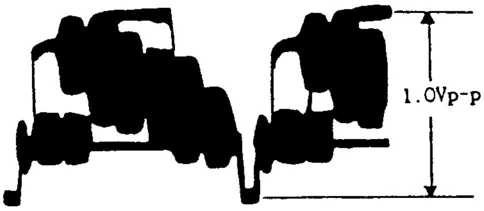


Fig. 1-7

1-10 RECORD CURRENT

CONDITIONS

MODE - RECORD
Input signal - PAL color bar

INSTRUCTIONS

1. Connect the adjustment jig PCB (**JG065**) to the CP3003 and CP5005, input the PAL color bar signal.
2. Connect CH-1 on the oscilloscope to **TP4101** and CH-2 to **TP3006**. Connect **TP4102** to GND.
3. Connect **TP3004** to the ground with wire in order to cut Y-signal.
4. Adjust **VR3006** so that the magenta level becomes 35±2mVp-p as shown in **Fig. 1-8-a**.
5. Adjust **VR3007** so that the horizontal sync level becomes 110±5mVp-p as shown in **Fig. 1-8-b**.

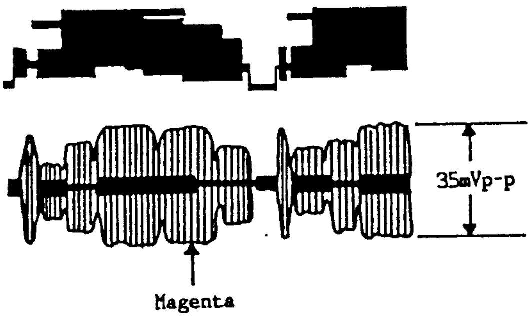


Fig. 1-8-a

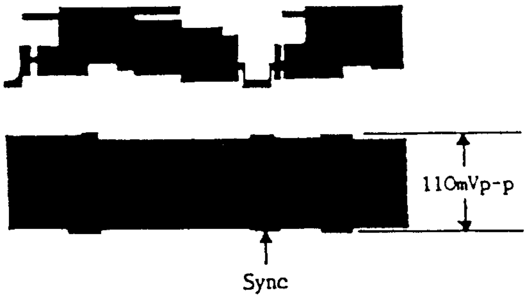


Fig. 1-8-b

1-11: AUDIO BIAS CURRENT

CONDITIONS

MODE - RECORD
Input signal - No signal

INSTRUCTIONS

1. Connect the AC voltmeter to **TP5001** and **TP5002** (GND).
2. Adjust the voltage to 2.8±0.1mVrms with **VR5001**.

1-12: AUDIO PLAYBACK LEVEL

CONDITIONS

MODE - Self(RECORD and PLAYBACK)
SP MODE
Input signal - Audio signal: 1KHz 300mVrms
Video signal: Color bar

NOTE: Audio out of the unit should be terminated with a 47K ohm load.

INSTRUCTIONS

1. Input the color bar signal to the **CP3003**.
2. Input the audio signal to the **CP5005**.
3. Connect the AC voltmeter to **pin 6 of J4201**.
4. Adjust **VR5002** so that the playback output becomes 400±10mVrms.

ELECTRICAL ADJUSTMENTS

2. CAMERA SECTION

Test instruments

1. Frequency counter
2. Oscilloscope(dual trace)
3. Vectorscope
4. Color monitor
5. DC Voltmeter
6. Collimeter

2-1: CLOCK FREQUENCY

NOTE: Allow unit to warm up for 5 seconds before adjusting.

INSTRUCTIONS

1. Connect the frequency counter to **TP7001**.
2. Adjust the frequency to 9656250 ±25 Hz with **TC7001**.

2-2: RESET BIAS

CONDITION

Test chart - Grey scale pattern (JG051)

INSTRUCTIONS

1. Pick up a grey scale pattern.
2. Connect the oscilloscope to **TP7014**.
3. Adjust **VR7019** so that the level (from "A" to "B" on the **Fig. 2-1**) is at maximum.

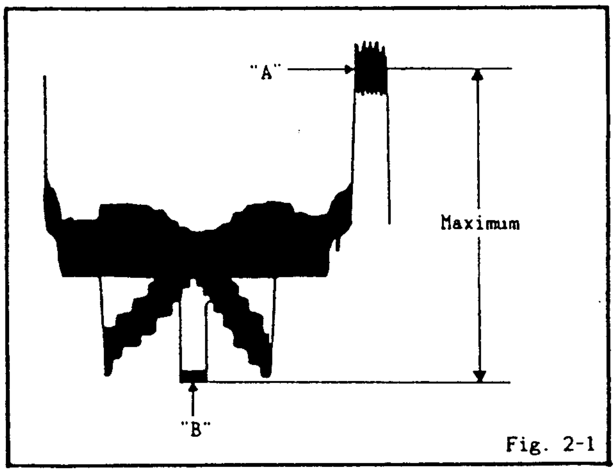


Fig. 2-1

2-3: V-SUB

CONDITION

Test chart - Window chart

NOTE: Cut the black and thick paper as shown below.
Make the window chart.

INSTRUCTIONS

1. Short **pin 2 of CP8004** and **TP8001** to open the IRIS.
2. Press "wide-angle" to zoom out and shoot a fluorescent light in the viewfinder.
3. Shoot the fluorescent light on the upper portion the viewfinder.
   Adjust the **VR7001** so that the blooming appears and the light flows in the vertical direction.
4. Adjust the **VR7001** to the opposite direction of step 3, so that the blooming and vertical light disappear.
5. Select the shutter speed of 1/1000.
   When you shoot a fluorescent light, check if the vertical light appears.

2-4: YH SET UP

NOTE: It is easy to see the waveform by terminating the 10K ohm resistor to pin 4 of CP8001.

INSTRUCTIONS

1. Connect the oscilloscope to **pin 4 of CP8001**.
2. Cover the lens with the cap.
3. Adjust **VR7005** so that the waveform measures 50±5mVp-p. **(Refer to Fig. 2-2)**

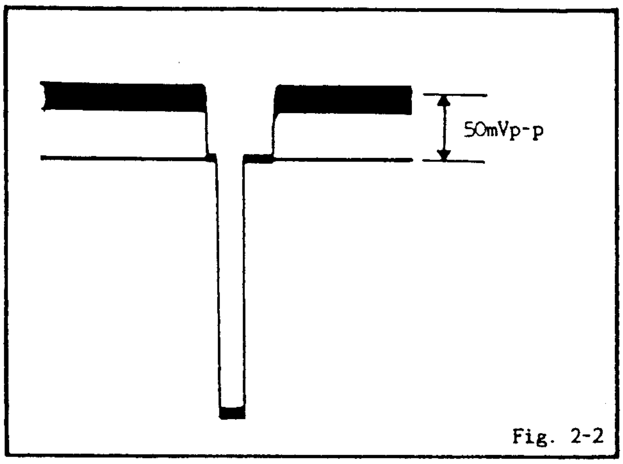


Fig. 2-2

2-5: V-EDGE 1H

CONDITION

Test chart - Grey scale pattern (JG051)

INSTRUCTIONS

1. Pick up a grey scale pattern.
2. Fill screen with grey scale pattern.
3. Connect CH-1 of the oscilloscope to **TP8004** and CH-2 of the oscilloscope to **TP8005**.
4. Reverse the waveform for CH-2 with an inverter and put both the waveform for CH-1 and CH-2 together by pressing the ADD SW on the oscilloscope.
5. Adjust **VR7015** so that the waveform of CH-1 is straight as shown in **Fig. 2-3**.

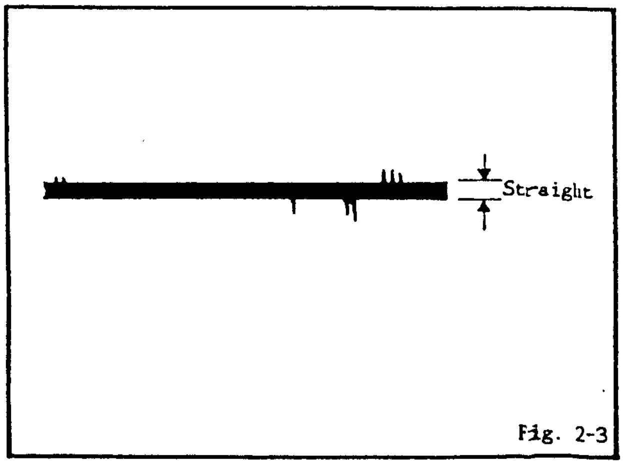


Fig. 2-3

ELECTRICAL ADJUSTMENTS

2-6: IRIS LEVEL

CONDITION

Test chart - Grey scale pattern (JG051)

NOTE: It is easy to see the waveform by terminating the 10K ohm resistor to **TP7006**.

INSTRUCTIONS

1. Pick up a grey scale pattern.
2. Turn the **VR7014** fully clockwise.
3. Connect the oscilloscope to **TP7006**.
4. Adjust **VR8001** so that the waveform measures 250±10mVp-p. **(refer to Fig. 2-4)**

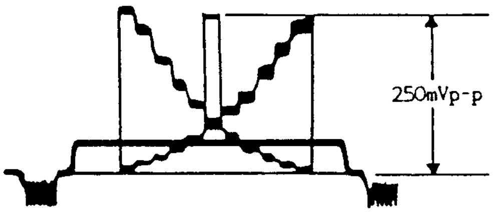


Fig. 2-4

2-7: AGC LEVEL

CONDITION

Test chart - Grey scale pattern (JG051)

NOTE: It is easy to see the waveform by terminating the 10K ohm resistor to **TP7006**.

INSTRUCTIONS

1. Connect the DC voltmeter to **TP7015**.
2. Cover the lens with the cap.
3. Adjust the voltage to 2.0±0.05V with **VR7014**.

2-8: SYNC LEVEL

CONDITION

Test chart - Grey scale pattern (JG051)

INSTRUCTIONS

1. Pick up a grey scale pattern.
2. Connect the oscilloscope to **pin 4 of CP8001**.
3. Adjust **VR8011** as the sync level will be 300+0, −10mVp-p. **(Refer to Fig. 2-5)**

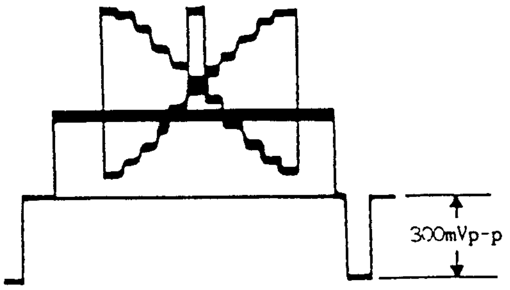


Fig. 2-5

2-9: YH GAIN

CONDITION

Test chart - Grey scale pattern (JG051)

INSTRUCTIONS

1. Pick up a grey scale pattern.
2. Fill screen with grey scale pattern.
3. Connect the oscilloscope to **pin 4 of CP8001**.
4. Adjust **VR8008** so that the waveform measures 1.00±0.05Vp-p. **(refer to Fig. 2-6)**

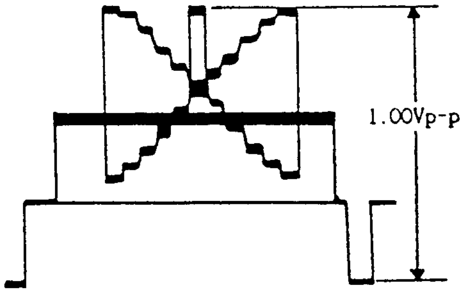


Fig. 2-6

2-10: YL LEVEL

CONDITION

Test chart - Grey scale pattern (JG051)

NOTE: When the unit is power off, short circuit pin 1 and pin 2 of **CP8004**.
Power on the unit.
Reset time in the power off should be more the 5 seconds.

INSTRUCTIONS

1. Pick up a grey scale pattern.
2. Fill screen with grey scale pattern.
3. Connect the oscilloscope to **TP7003**.
4. Adjust **VR7002** so that the waveform measures 300±10mVp-p. **(refer to Fig. 2-7)**

ELECTRICAL ADJUSTMENTS

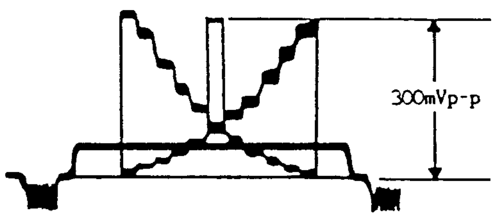


Fig. 2-7

2-11: YL SET UP

NOTE: With the unit's power off, short circuit pin 1 and pin 2 of **CP8004**.
Power on the unit.
Reset time in the power off should be more the 5 seconds.

INSTRUCTIONS

1. Cover the lens with the cap.
2. Connect the oscilloscope to **TP7008**.
3. Adjust **VR7018** so that the waveform measures 180±10mVp-p. **(refer to Fig. 2-8)**

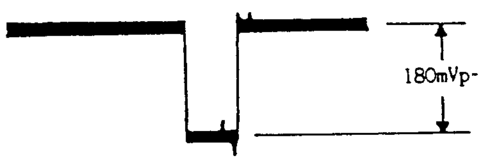


Fig. 2-8

2-12: YL GAIN

CONDITION

Test chart - Grey scale pattern (JG051)

NOTE: With the unit's power off, short circuit pin 1 and pin 2 of **CP8004**.
Power on the unit.
Reset time in the power off should be more the 5 seconds.

INSTRUCTIONS

1. Pick up a grey scale pattern.
2. Fill screen with grey scale pattern.
3. Connect the oscilloscope to **TP7008**.
4. Adjust **VR7011** so that the waveform measures 420±10mVp-p. **(Refer to Fig. 2-9)**
5. After adjusting, re-confirm that the adjustment of YL SET UP (ITEM 2-11) must be 180mVp-p.
   If shifted, it is necessary to re-adjust.
6. Turn, re-confirm that the adjustment of YL GAIN (ITEM 2-12) must be 420mVp-p.
   If shifted, it is necessary to re-adjust.

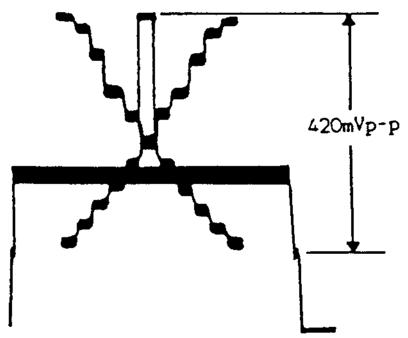


Fig. 2-9

2-13: R/B SEPARATION

CONDITION

Test chart - Color bar pattern (JG052)

NOTE: With the unit's power off, short circuit pin 1 and pin 2 of **CP8004**.
Power on the unit.
Reset time in the power off should be more the 5 seconds.

INSTRUCTIONS

1. Pick up a color bar pattern.
2. Cover the lens with the filter (**JG048**).
3. Connect CH-1 of the oscilloscope to **TP7004** and CH-2 of the oscilloscope to **TP7002**.
4. Adjust **VR7013** so that the level at yellow is as same as the level at green.
   (Refer to Fig. 2-10-a)
5. Next, re-connect CH-1 of the oscilloscope from **TP7004** to **TP7005**.
6. Adjust **VR7012** so that the level at yellow is as same as the level at red.
   (Refer to Fig. 2-10-b)

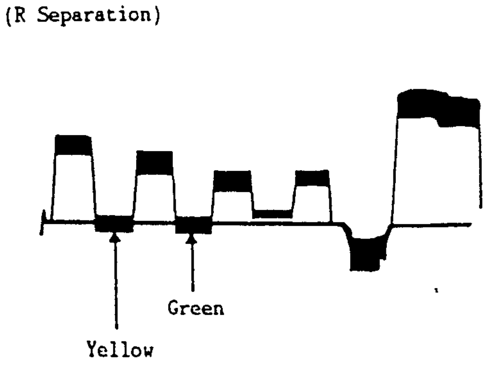


Fig. 2-10-a

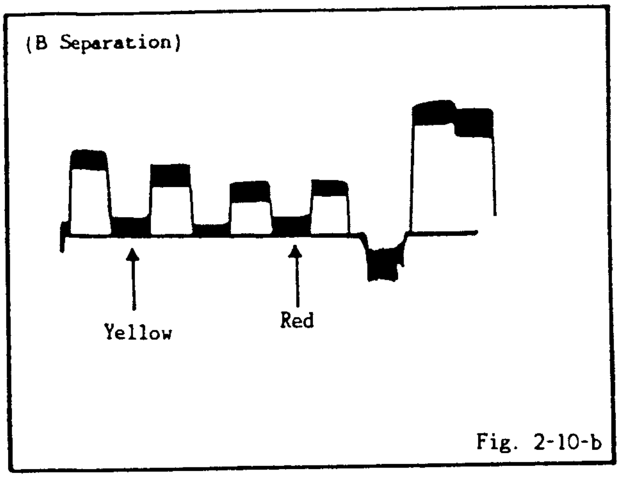


Fig. 2-10-b

2-14: CARRIER BALANCE

NOTE: With the unit's power off, short circuit pin 1 and pin 2 of CP8004.
Power on the unit.
Reset time in the power off should be more the 5 seconds.

INSTRUCTIONS

1. Cover the lens with the cap.
2. Connect the vectorscope to 1 pin of J4201.
3. Adjust VR7010 so that lighting point is collected in the center of the vectorscope. **(Refer to Fig. 2-11)**

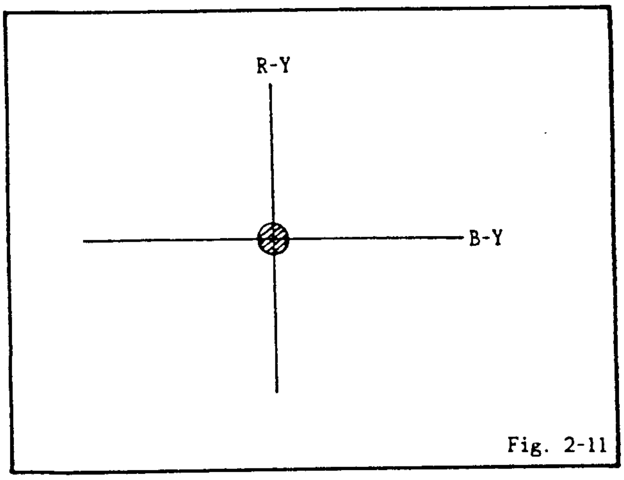


Fig. 2-11

2-15: R/B LEVEL

CONDITION

Test chart - Grey scale pattern (JG051)

NOTE: With the unit's power off, short circuit pin 1 and pin 2 of CP8004.
Power on the unit.
Reset time in the power off should be more the 5 seconds.

INSTRUCTIONS

1. Pick up a grey scale pattern.
2. Cover the lens with the filter (JG048).
3. Connect the vectorscope to 1 pin of J4201.
4. Adjust VR7003 and VR7004 so that lighting point is collected in the center of the vectorscope. **(Refer to Fig. 2-12)**

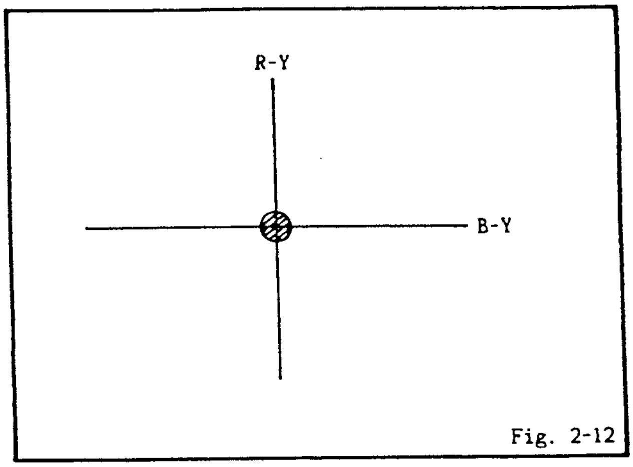


Fig. 2-12

2-16: R/B SET UP

NOTE: With the unit's power off, short circuit pin 1 and pin 2 of CP8004.
Power on the unit.
Reset time in the power off should be more the 5 seconds.

INSTRUCTIONS

1. Cover the lens with the cap.
2. Connect the vectorscope to 1 pin of J4201.
3. Adjust VR7006 and VR7007 so that lighting point is collected in the center of the vectorscope. **(Refer to Fig. 2-13)**
4. After adjusting, re-confirm that the adjustment of R/B LEVEL (ITEM 2-15) will not shift. If so, it is necessary to re-adjust.

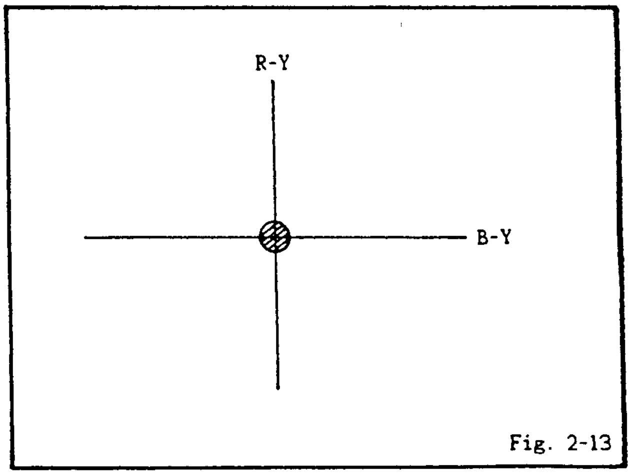


Fig. 2-13

ELECTRICAL ADJUSTMENTS

2-17: COLOR DIFFERENCE

CONDITION

Test chart - Color bar pattern (JG052)

NOTE: With the unit's power off, short circuit pin 1 and pin 2 of CP8004.
Power on the unit.
Reset time in the power off should be more the 5 seconds.

INSTRUCTIONS

1. Pick up a color bar pattern.
2. Cover the lens with the filter (JG048).
3. Connect CH-1 of the oscilloscope to TP7010 and CH-2 of the oscilloscope to TP7011.
4. Adjust VR7016 so that the output level of the waveform shifts 1H on CH-1 and CH-2 and is the same. (Refer to Fig. 2-14)
5. After adjusting NOISE SUPPRESSOR BALANCE (ITEM 2-18), connect the 1 pin of J4201 with vectorscope.
6. Adjust VR7016 so that two bright points overlap and become one point and limit the shaking of the red.

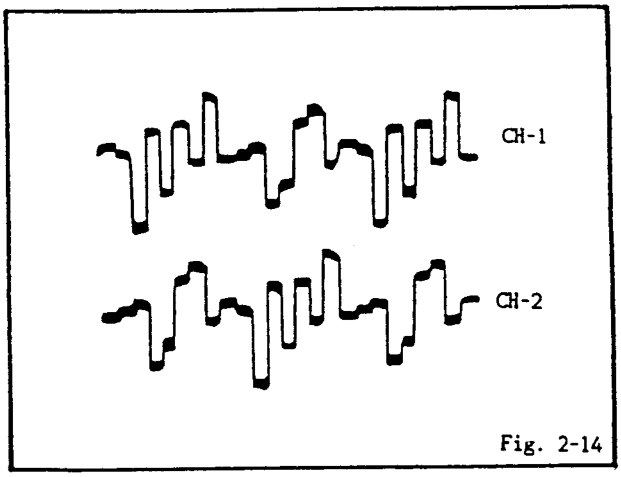


Fig. 2-14

2-18: NOISE SUPPRESSOR BALANCE

CONDITION

Test chart - Color bar pattern (JG052)

NOTE: With the unit's power off, short circuit pin 1 and pin 2 of CP8004.
Power on the unit.
Reset time in the power off should be more the 5 seconds.

INSTRUCTIONS

1. Pick up a color bar pattern.
2. Cover the lens with the filter (JG048).
3. Connect CH-1 of the oscilloscope to TP7010 and CH-2 of the oscilloscope to TP7013.
4. Reverse the waveform for CH-2 with an inverter and put both the waveform for CH-1 and CH-2 together by pressing the ADD SW on the oscilloscope.
5. Adjust VR7017 so that the waveform of CH-1 is straight as shown in Fig. 2-15.
6. After adjusting, repeat adjustments that COLOR DIFFERENCE (ITEM 2-17) and NOISE SUPPRESSOR BALANCE (ITEM 2-18).

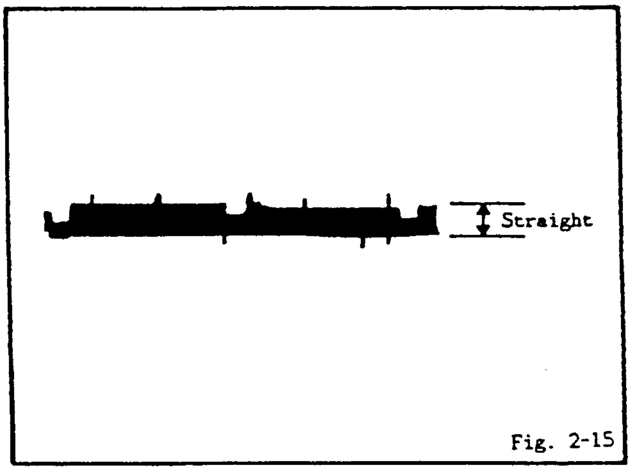


Fig. 2-15

2-19: BURST PHASE

CONDITION

Test chart - Color bar pattern (JG052)

INSTRUCTIONS

1. Pick up a color bar pattern.
2. Connect the vectorscope to pin 1 of J4201.
3. Adjust VR8007 for the vectorscope waveform to be as shown in Fig. 2-16.

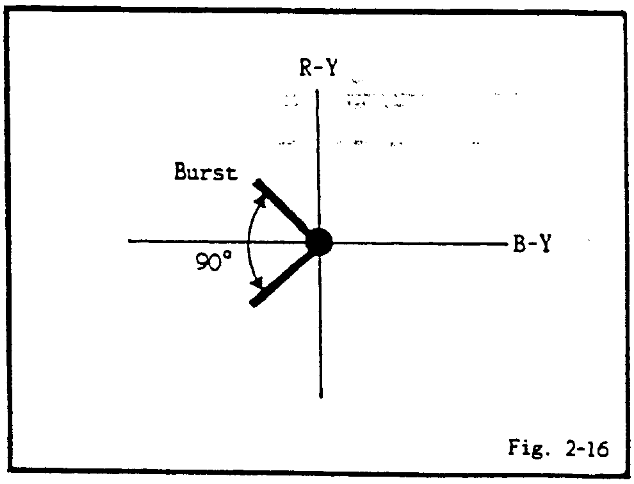


Fig. 2-16

2-20: BURST LEVEL

CONDITION

Test chart - Color bar pattern (JG052)

INSTRUCTIONS

1. Pick up a color bar pattern.
2. Connect the oscilloscope to 6 pin of CP8001.
3. Adjust VR8006 so that the burst level is 300±30mVp-p. (Refer to Fig. 2-17)

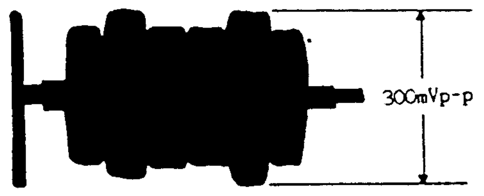


Fig. 2-17

2-21: R-Y/B-Y GAIN

CONDITION

Test chart - Color bar pattern (JG052)

NOTE: With the unit's power off, short circuit pin 1 and pin 2 of **CP8004**.
Power on the unit.
Reset time in the power off should be more the 5 seconds.

INSTRUCTIONS

1. Pick up a color bar pattern.
2. Cover the lens with the filter (**JG048**).
3. Connect CH-1 of the oscilloscope to **TP7002** and CH-2 of the oscilloscope to **TP8002**.
4. Adjust **VR7009** so that the B-Y level is 400±20mVp-p. **(Refer to Fig. 2-18-a)**
5. Next, reconnect CH-2 of the oscilloscope from **TP8002** to **TP8003**.
6. Adjust **VR7008** so that the R-Y level is 450±20mVp-p. **(Refer to Fig. 2-18-b)**

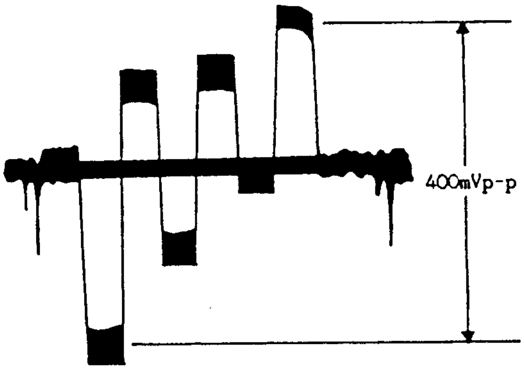


Fig. 2-18-a

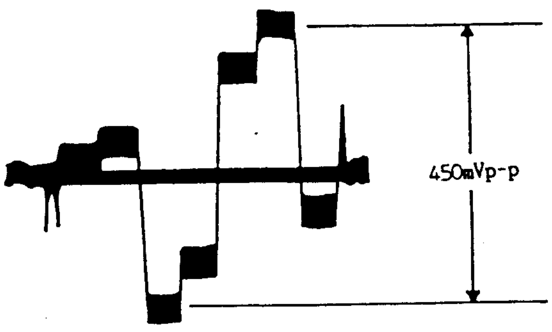


Fig. 2-18-b

2-22: CHROMA GAIN

CONDITION

Test chart - Color bar pattern (JG052)

NOTE: With the unit's power off, short circuit pin 1 and pin 2 of **CP8004**.
Power on the unit.
Reset time in the power off should be more the 5 seconds.

INSTRUCTIONS

1. Pick up a color bar pattern.
2. Cover the lens with the filter (**JG048**).
3. Connect the oscilloscope to **pin 6 of CP8001**.
4. Adjust **VR8009** so that the red level is 350±10mVp-p. **(Refer to Fig. 2-19)**
5. After adjusting, confirm that the green level is 300±50mVp-p.

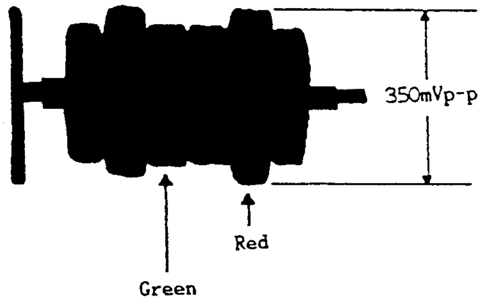


Fig. 2-19

2-23: OUTDOOR PRESET

CONDITION

Test chart - Grey scale pattern (**JG051**)
White balance select sw - Outdoor position

INSTRUCTIONS

1. Pick up a grey scale pattern.
2. Connect the vectorscope to **pin 1 of J4201**.
3. Cover the lens with the filter (**JG048A**).
4. Adjust **VR8004** and **VR8005** so that lighting point is collected in the center of the vectorscope. **(Refer to Fig. 2-20)**

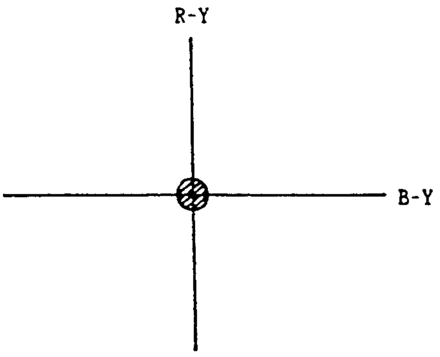


Fig. 2-20

ELECTRICAL ADJUSTMENTS

2-24: INDOOR PRESET

CONDITION

Test chart - Grey scale pattern (JG051)
White balance select sw - Indoor position

INSTRUCTIONS

1. Pick up a grey scale pattern.
2. Connect the vectorscope to **pin 1 of J4201.**
3. Adjust **VR8002** and **VR8003** so that lighting point is collected in the center of the vectorscope. **(Refer to Fig. 2-21)**

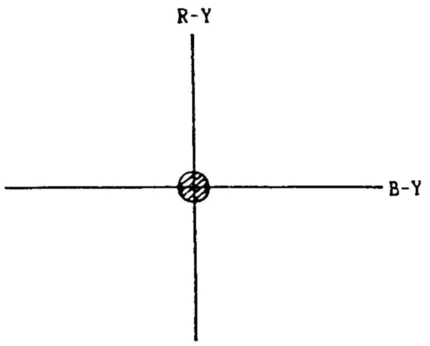


Fig. 2-21

2-25: BACK FOCUS

INSTRUCTIONS

1. Set the AUTO FOCUS SW to MANUAL position. (Set the focus to ∞ position.)
2. Cover the lens with the ND filter (**JG049**).
3. Short the **pin 2 of CP8004** and **TP8001** open the IRIS.
4. Set the "zoom" to "wide-angle" position.
5. Loosen the screw ①.
6. Using a collimeter adjust the point "A" with the back focus adjustment driver (**JG046B**) until the best picture of **Fig. 2-22** appears.
7. After the above adjustment, tighten the screw ① and re-check the focus. **(Refer to Fig. 2-22)**

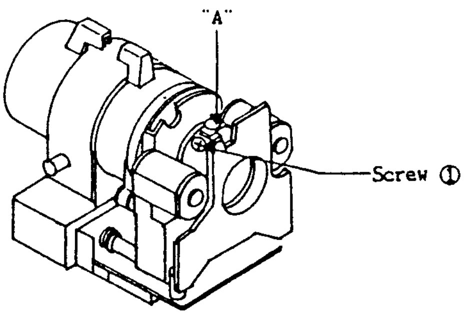


Fig. 2-22

2-26: AUTO FOCUS

CONDITION

Test chart - None (white pattern)

INSTRUCTIONS

1. Remove the RUBBER AF. **(Refer to Fig. 2-23)**
2. Set the distance indication of focus ring to 3 meters. (This time, set the focus correctly.)
3. Set the "zoom" to "tele-angle" position.
4. Set the focus to the auto.
5. When the auto focus is operated at the infinite or finite, confirm that the operation of focus ring will stop at 3 meters on the distant indication. If not, adjust the part "A" so that the distant indication of focus ring will be 3 meters. **(Refer to Fig. 2-23)**

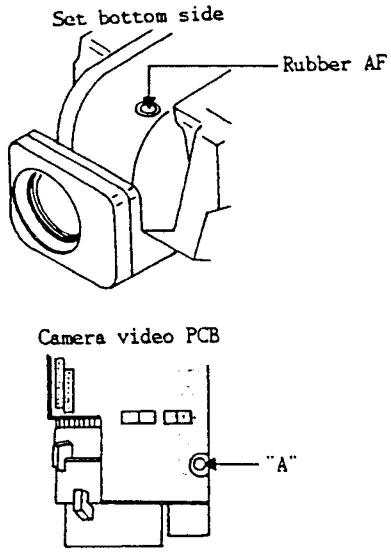


Fig. 2-23

ELECTRICAL ADJUSTMENTS

3. VIEWFINDER SECTION

Test instrument

1. Frequency counter

3-1: FOCUS

INSTRUCTIONS

1. Install the viewfinder onto the camera.
2. Turn on the power and see the "TAPE" indicator appears clearly.
   In case of the difficulty for the focus adjustment due to the variation of the anode voltage.
   Change the short position of SW401 as shown in Fig. 3-1.

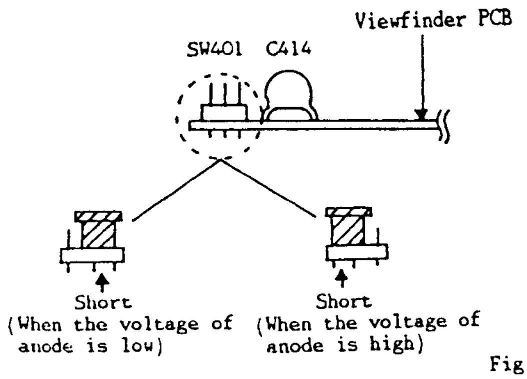

Viewfinder PCB
SW401
C414
Short
(When the voltage of anode is low)
Short
(When the voltage of anode is high)

Fig. 3-1

3-2: HORIZONTAL FREE RUN

INSTRUCTIONS

1. Shut off the input signal and set the screen to the free-run condition.
2. Connect the frequency counter to the vacant pin of the SW401.
3. Adjust **VR401** so that the value of the frequency counter is 15.734KHz ± 200Hz.

3-3: BRIGHT

INSTRUCTIONS

1. Receive the monochrome pattern.
2. Adjust **VR403** until 1.5 the of 4 gray scales become black.

3-4: V-SIZE

INSTRUCTIONS

1. Receive the monochrome pattern.
2. Adjust **VR402** so that the value of the V-SIZE is 90 ± 2%.

3-5: H-SIZE

INSTRUCTIONS

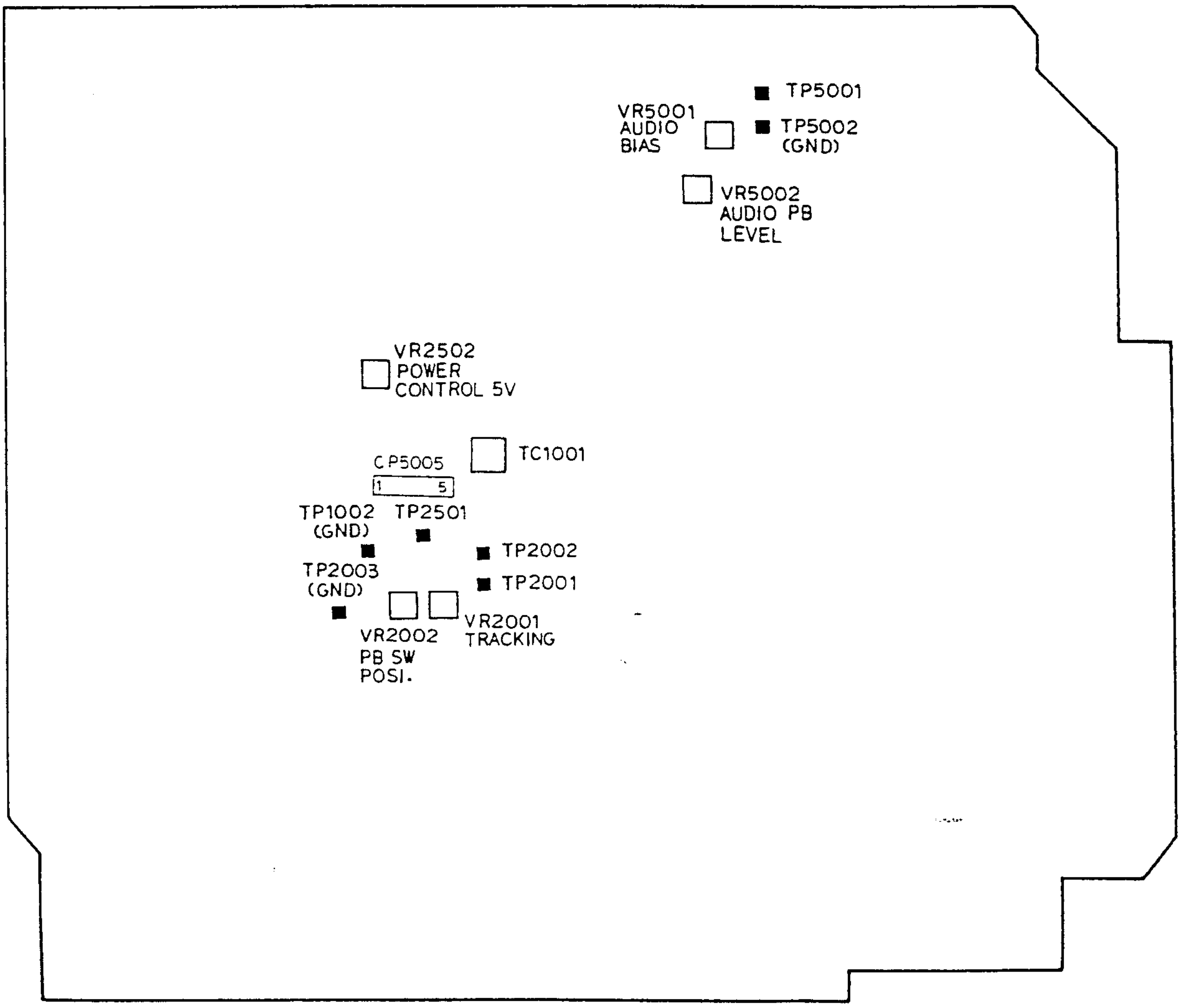
1. Receive the monochrome pattern.
2. Adjust the screen centering(vertical and horizontal directions) by moving the magnet of DY.
3. Adjust the magnet so that the difference of vertical and horizontal are within 0.5 scale.

3-6: CENTERING

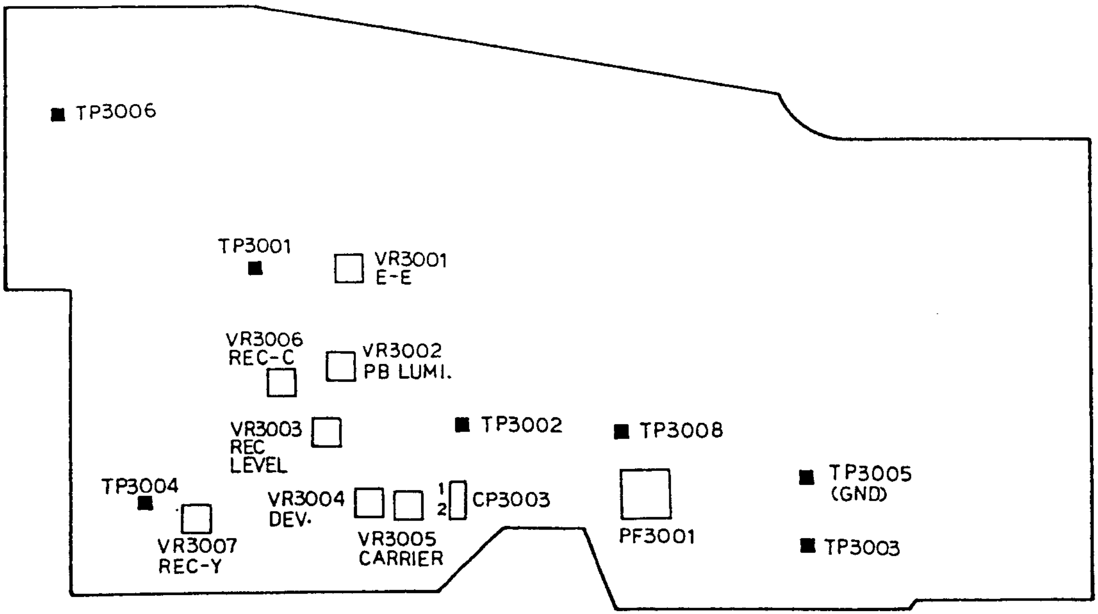
INSTRUCTIONS

1. Receive the monochrome pattern.
2. Move the DY forward and backward so that the H-SIZE is 90 ± 7%.

MAJOR COMPONENTS LOCATION GUIDE

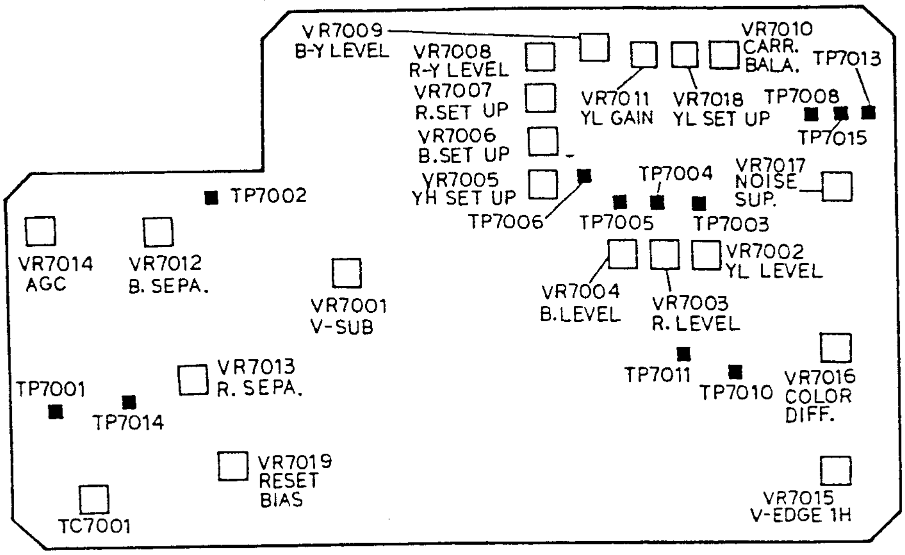

TP5001
VR5001
AUDIO
BIAS
TP5002
(GND)
VR5002
AUDIO PB
LEVEL
VR2502
POWER
CONTROL 5V
CP5005
1
5
TC1001
TP1002
(GND)
TP2501
TP2002
TP2003
(GND)
TP2001
VR2001
TRACKING
VR2002
PB SW
POSI.

MAIN

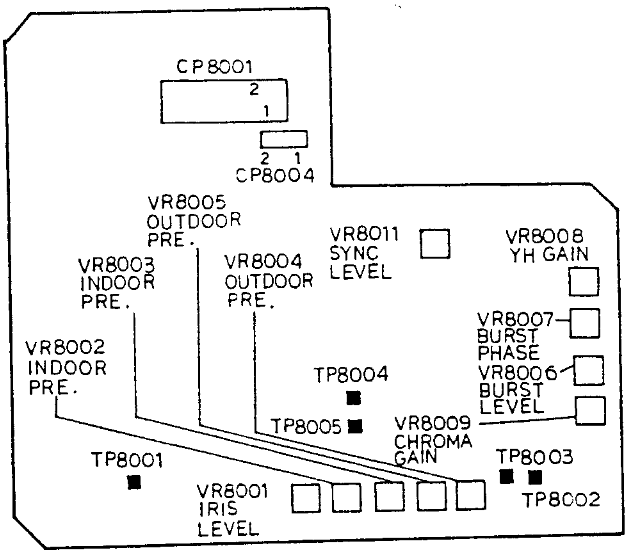

TP3006
TP3001
VR3001
E-E
VR3006
REC-C
VR3002
PB LUMI.
VR3003
REC
LEVEL
TP3002
TP3008
TP3004
VR3004
DEV.
1
2
CP3003
PF3001
TP3005
(GND)
VR3007
REC-Y
VR3005
CARRIER
TP3003

Y/C

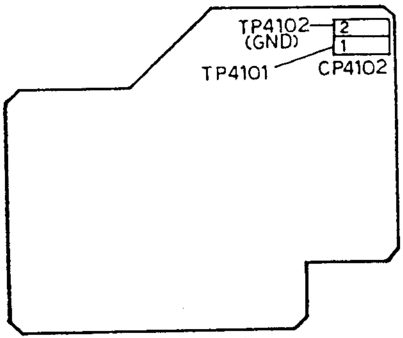
MAJOR COMPONENTS LOCATION GUIDE


VR7009
B-Y LEVEL
VR7008
R-Y LEVEL
VR7010
CARR.
BALA.
TP7013
VR7007
R.SET UP
VR7011
YL GAIN
VR7018
YL SET UP
TP7008
TP7015
VR7006
B.SET UP
VR7005
YH SET UP
TP7004
VR7017
NOISE
SUP.
TP7002
TP7006
TP7005
TP7003
VR7014
AGC
VR7012
B. SEPA.
VR7001
V-SUB
VR7002
YL LEVEL
VR7004
B.LEVEL
VR7003
R. LEVEL
TP7011
TP7010
VR7016
COLOR
DIFF.
TP7001
TP7014
VR7013
R. SEPA.
VR7019
RESET
BIAS
TC7001
VR7015
V-EDGE 1H

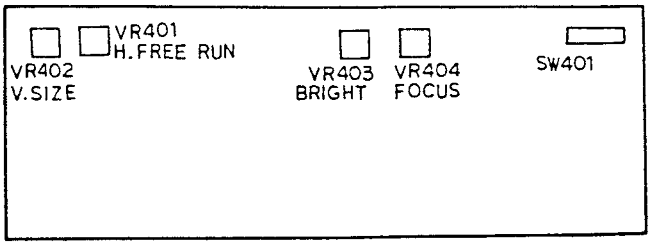
SSG


CP8001
2
1
2 1
CP8004
VR8005
OUTDOOR
PRE.
VR8003
INDOOR
PRE.
VR8004
OUTDOOR
PRE.
VR8011
SYNC
LEVEL
VR8008
YH GAIN
VR8007
BURST
PHASE
VR8006
BURST
LEVEL
VR8002
INDOOR
PRE.
TP8004
TP8005
VR8009
CHROMA
GAIN
TP8001
TP8003
TP8002
VR8001
IRIS
LEVEL

CAMERA VIDEO

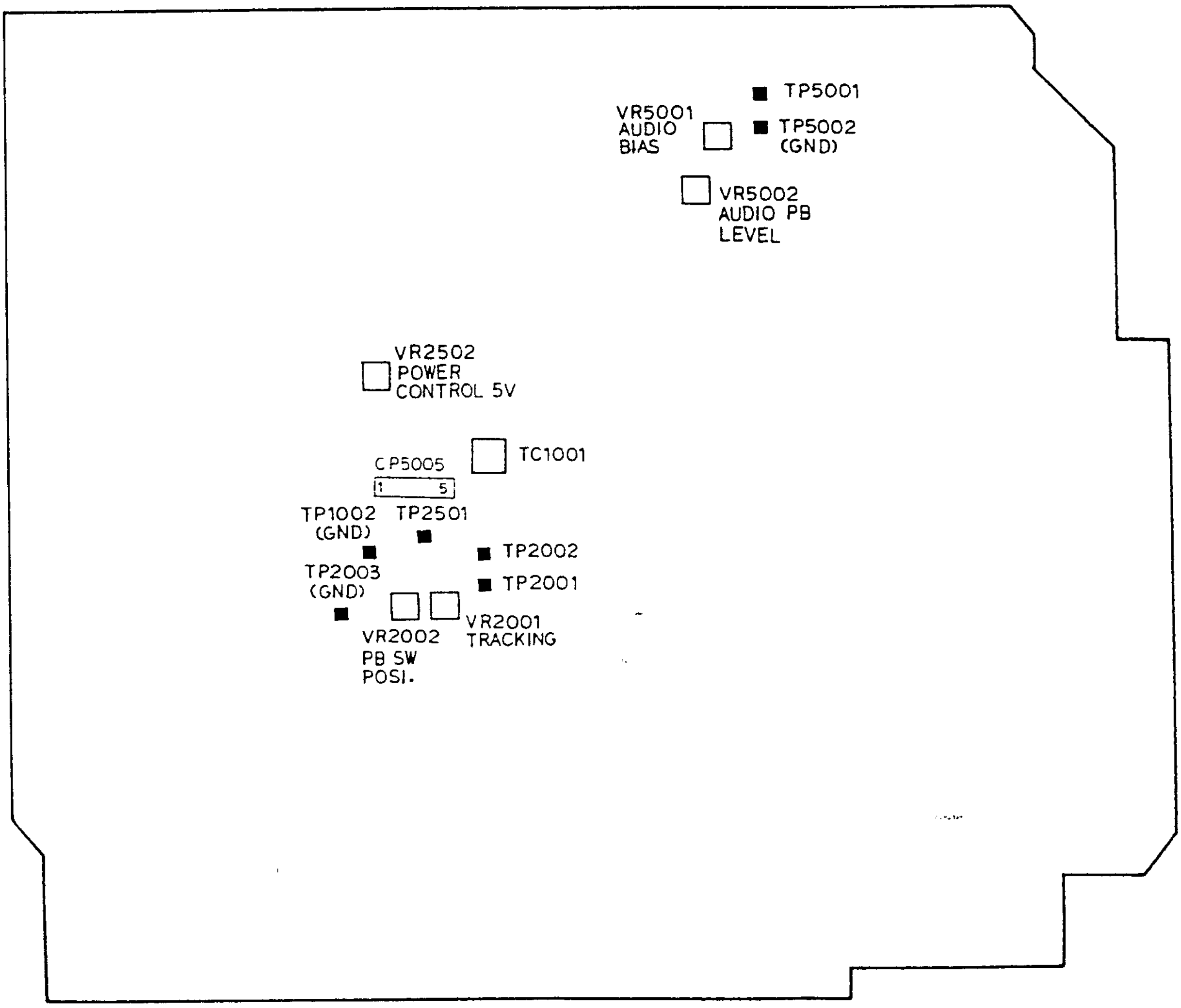

TP4102
(GND)
2
1
TP4101
CP4102

HEAD AMP

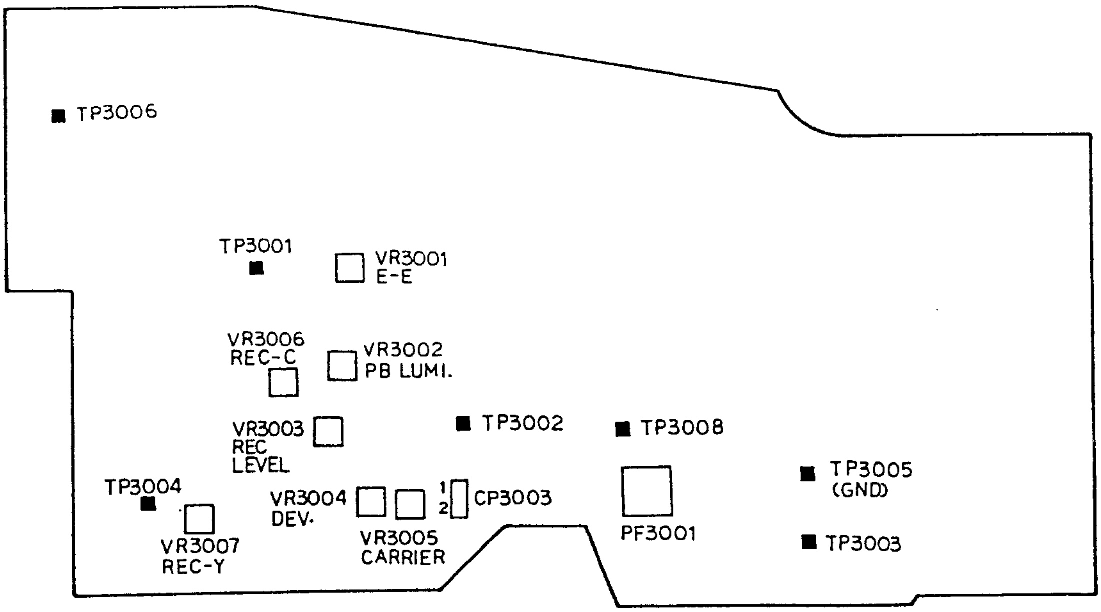

VR401
H.FREE RUN
VR402
V.SIZE
VR403
BRIGHT
VR404
FOCUS
SW401

VIEWFINDER

MAJOR COMPONENTS LOCATION GUIDE

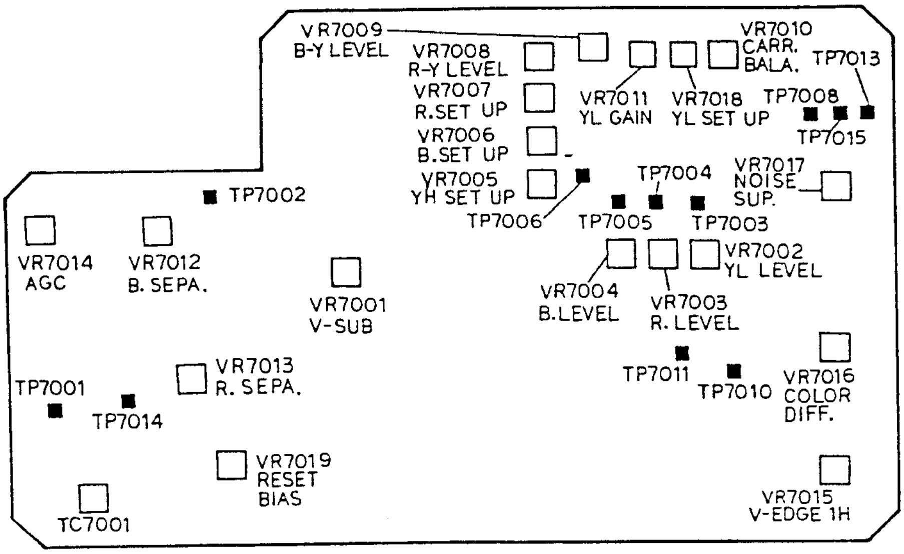

TP5001
VR5001
AUDIO
BIAS
TP5002
(GND)
VR5002
AUDIO PB
LEVEL
VR2502
POWER
CONTROL 5V
TC1001
CP5005
1
5
TP1002
(GND)
TP2501
TP2002
TP2003
(GND)
TP2001
VR2001
TRACKING
VR2002
PB SW
POSI.

MAIN

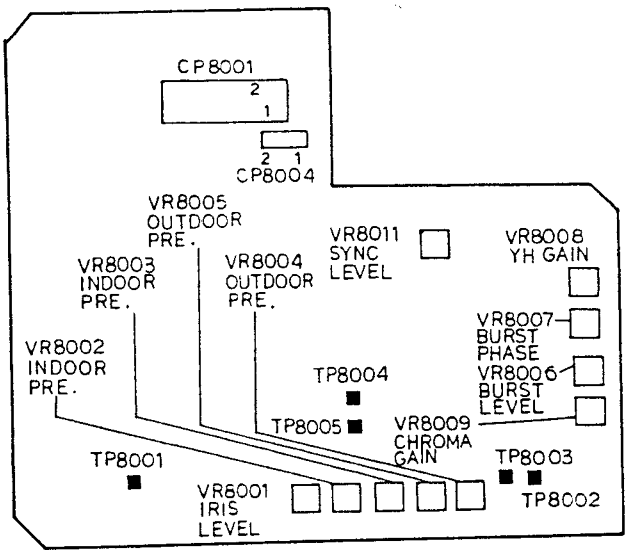

TP3006
TP3001
VR3001
E-E
VR3006
REC-C
VR3002
PB LUMI.
VR3003
REC
LEVEL
TP3002
TP3008
TP3005
(GND)
TP3004
VR3004
DEV.
1
2
CP3003
PF3001
TP3003
VR3007
REC-Y
VR3005
CARRIER

Y/C

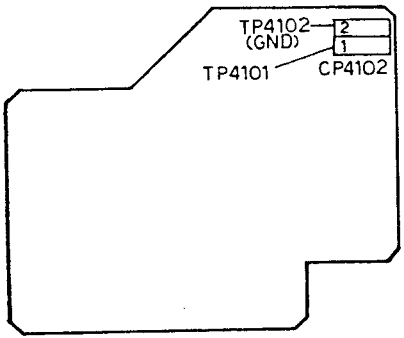
MAJOR COMPONENTS LOCATION GUIDE


VR7009
B-Y LEVEL
VR7008
R-Y LEVEL
VR7007
R.SET UP
VR7006
B.SET UP
VR7005
YH SET UP
TP7006
VR7010
CARR. BALA.
TP7013
VR7011
YL GAIN
VR7018
YL SET UP
TP7008
TP7015
TP7004
VR7017
NOISE SUP.
TP7005
TP7003
TP7002
VR7014
AGC
VR7012
B. SEPA.
VR7001
V-SUB
VR7004
B.LEVEL
VR7003
R. LEVEL
VR7002
YL LEVEL
VR7013
R. SEPA.
TP7001
TP7014
TP7011
TP7010
VR7016
COLOR DIFF.
VR7019
RESET BIAS
TC7001
VR7015
V-EDGE 1H

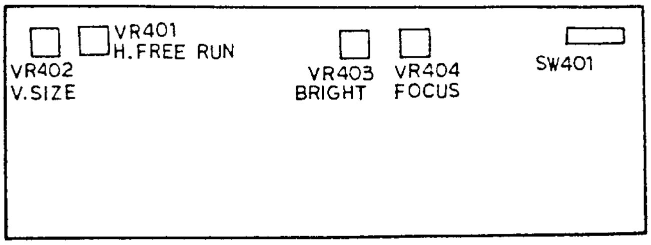
SSG


CP8001
2
1
2 1
CP8004
VR8005
OUTDOOR PRE.
VR8003
INDOOR PRE.
VR8004
OUTDOOR PRE.
VR8011
SYNC LEVEL
VR8008
YH GAIN
VR8007
BURST PHASE
VR8006
BURST LEVEL
VR8002
INDOOR PRE.
TP8004
TP8005
VR8009
CHROMA GAIN
TP8001
TP8003
TP8002
VR8001
IRIS LEVEL

CAMERA VIDEO

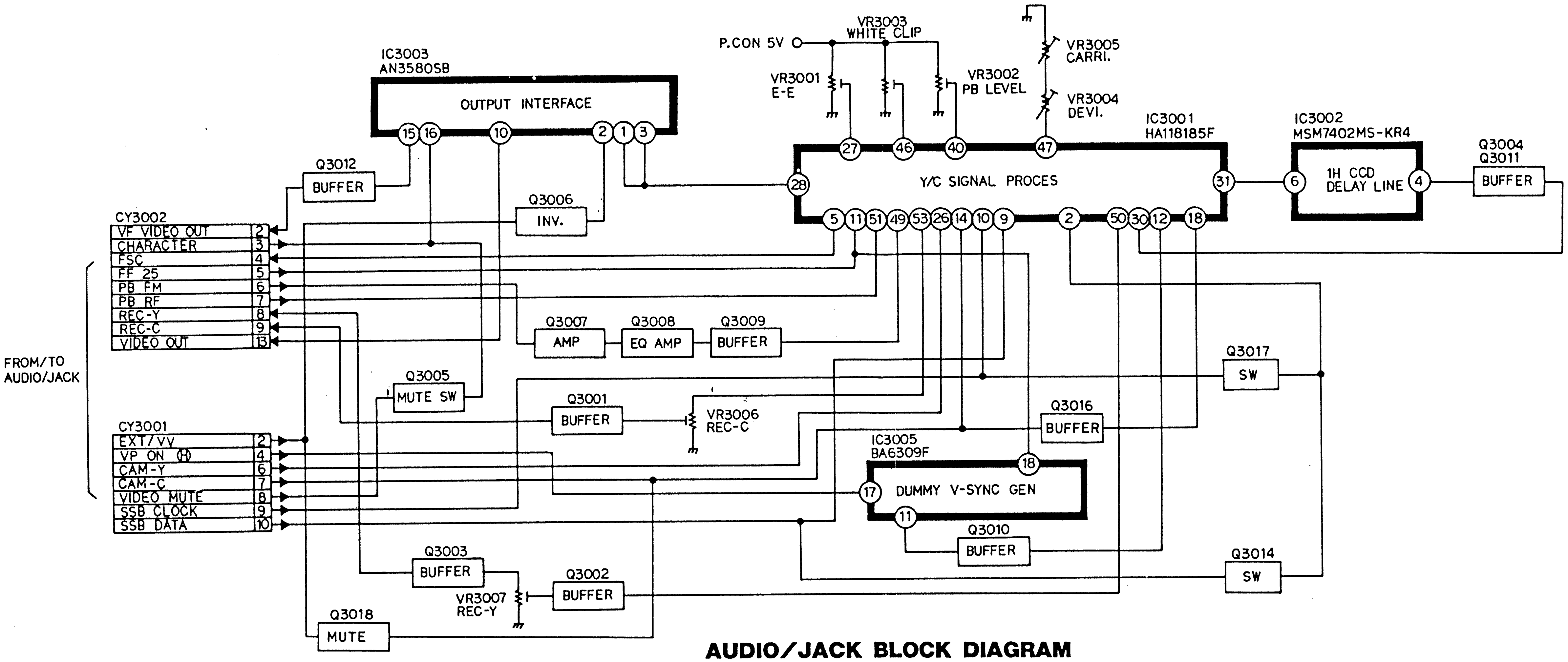

TP4102
(GND)
2
1
TP4101
CP4102

HEAD AMP

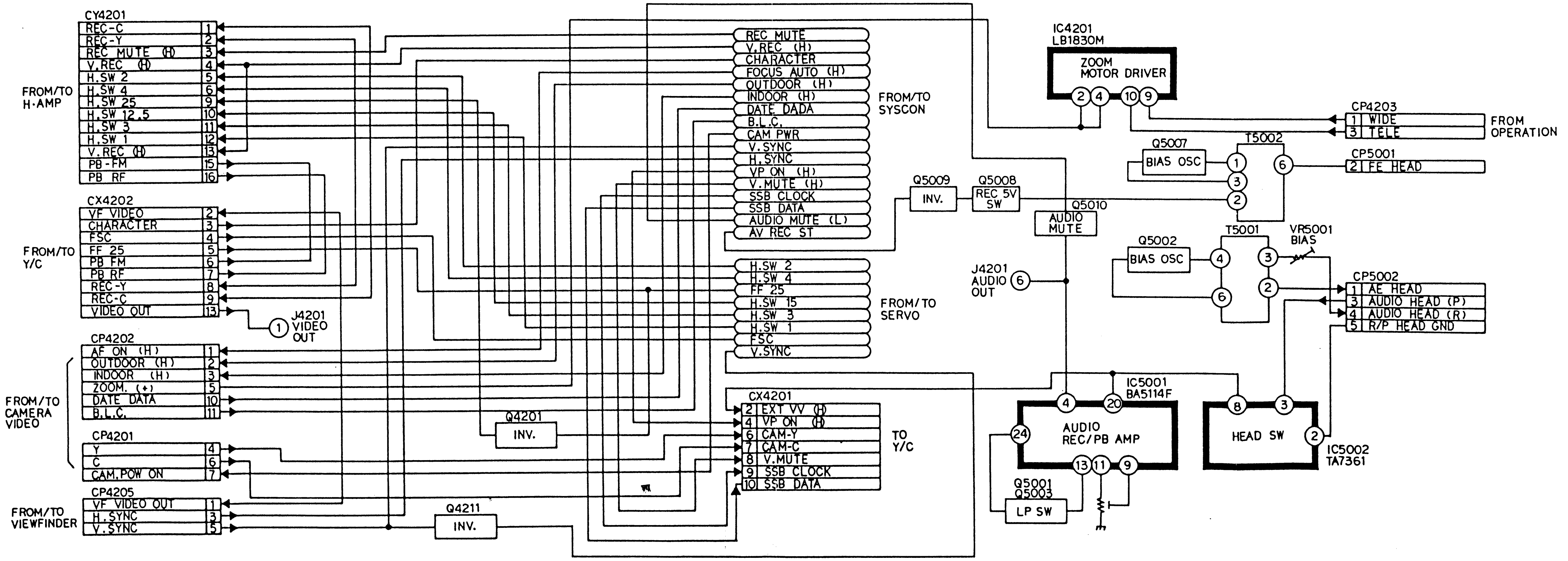

VR401
H.FREE RUN
VR402
V.SIZE
VR403
BRIGHT
VR404
FOCUS
SW401

VIEWFINDER

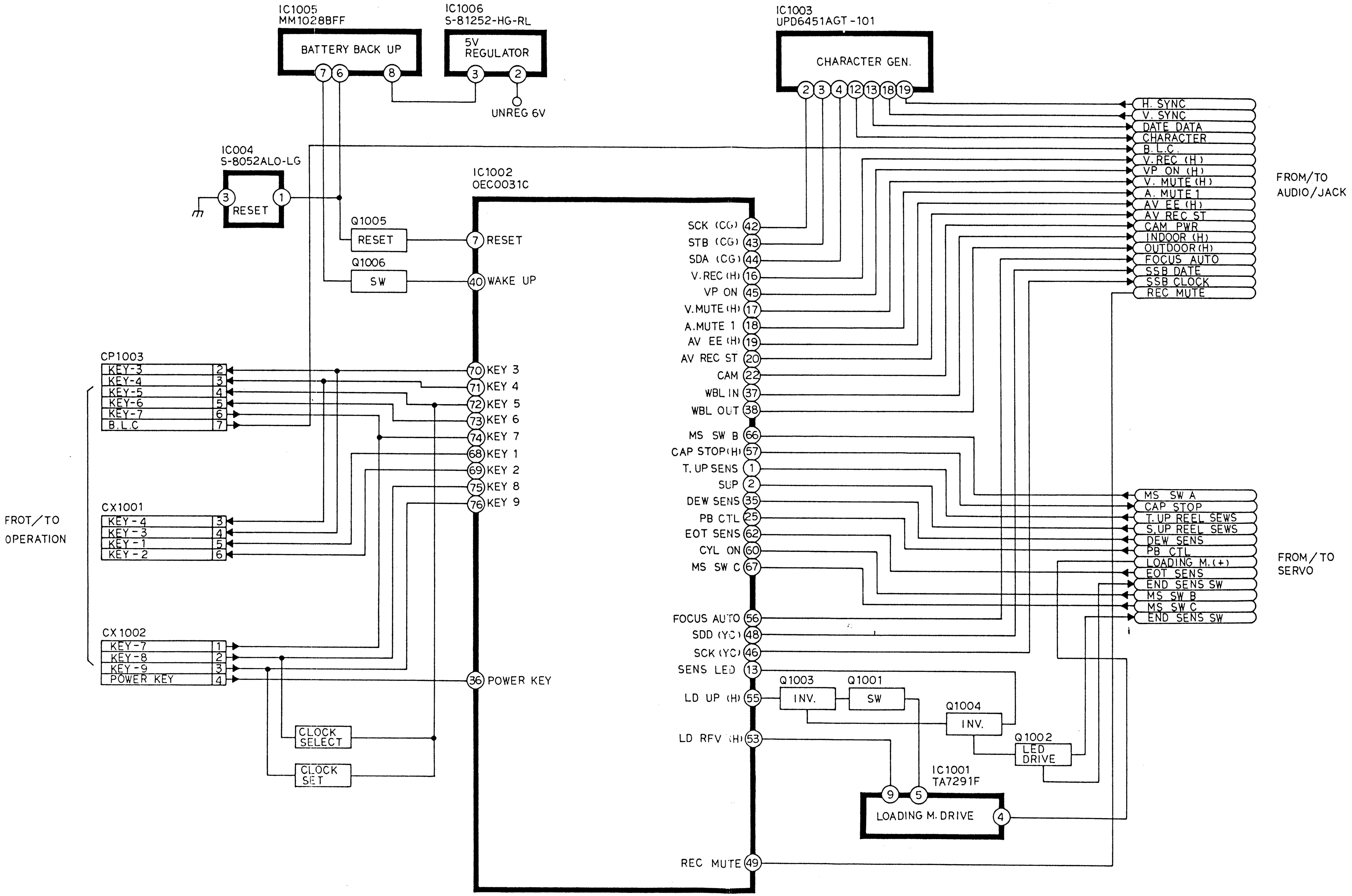
Y.C. BLOCK DIAGRAM


P.CON 5V
VR3003
WHITE CLIP
VR3001
E-E
VR3002
PB LEVEL
VR3005
CARRI.
VR3004
DEVI.
IC3003
AN3580SB
OUTPUT INTERFACE
IC3001
HA118185F
Y/C SIGNAL PROCES
IC3002
MSM7402MS-KR4
1H CCD
DELAY LINE
Q3004
Q3011
BUFFER
Q3012
BUFFER
Q3006
INV.
CY3002
VF VIDEO OUT
CHARACTER
FSC
FF 25
PB FM
PB RF
REC-Y
REC-C
VIDEO OUT
Q3007
AMP
Q3008
EQ AMP
Q3009
BUFFER
Q3017
SW
FROM/TO
AUDIO/JACK
Q3005
MUTE SW
Q3001
BUFFER
VR3006
REC-C
Q3016
BUFFER
CY3001
EXT/VV
VP ON Ⓗ
CAM-Y
CAM-C
VIDEO MUTE
SSB CLOCK
SSB DATA
IC3005
BA6309F
DUMMY V-SYNC GEN
Q3010
BUFFER
Q3003
BUFFER
VR3007
REC-Y
Q3002
BUFFER
Q3014
SW
Q3018
MUTE

AUDIO/JACK BLOCK DIAGRAM

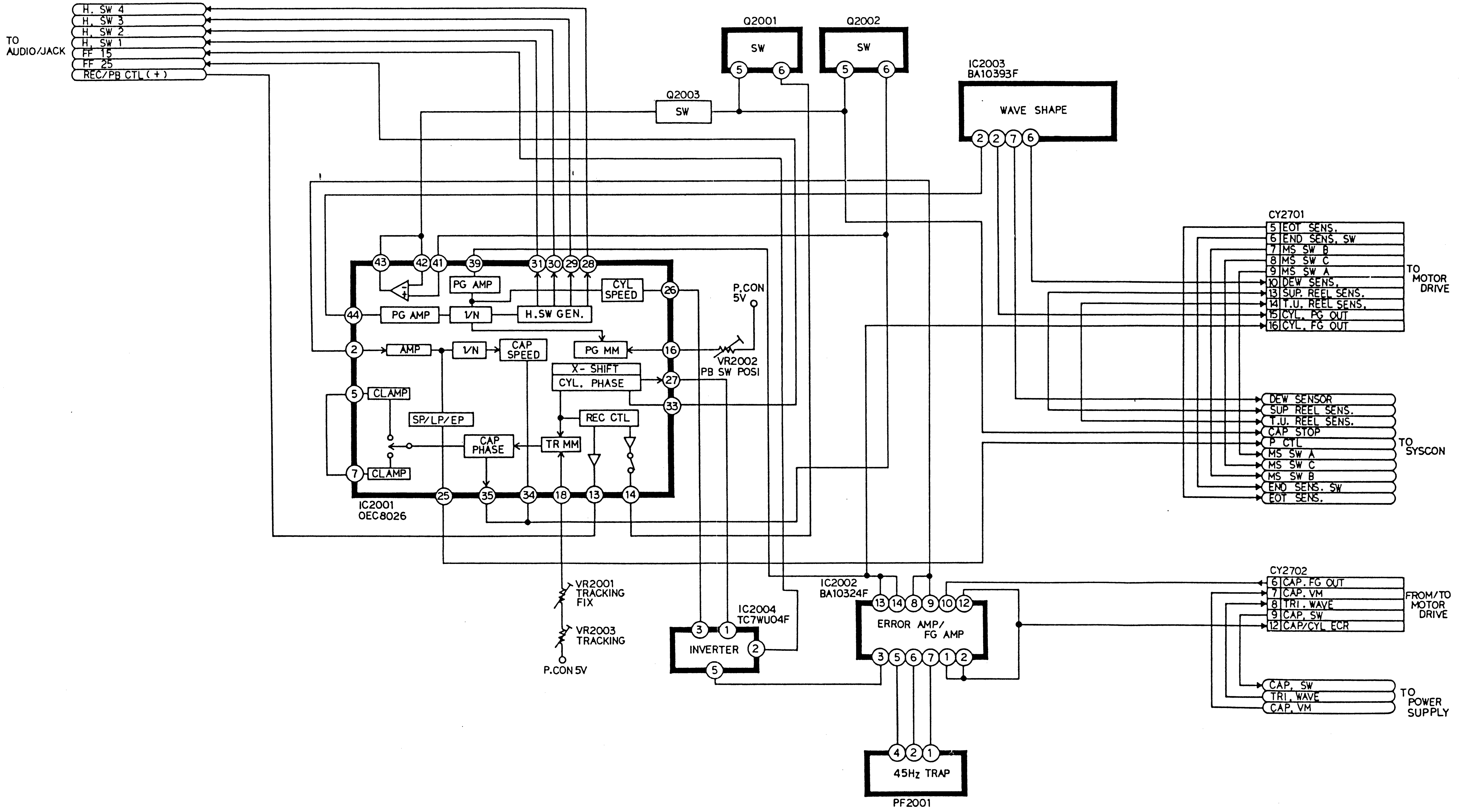

CY4201
REC-C
REC-Y
REC MUTE Ⓗ
V.REC Ⓗ
H.SW 2
H.SW 4
H.SW 25
H.SW 12.5
H.SW 3
H.SW 1
V.REC Ⓗ
PB-FM
PB RF
FROM/TO
H·AMP
CX4202
VF VIDEO
CHARACTER
FSC
FF 25
PB FM
PB RF
REC-Y
REC-C
VIDEO OUT
FROM/TO
Y/C
J4201
VIDEO
OUT
CP4202
AF ON (H)
OUTDOOR (H)
INDOOR (H)
ZOOM. (+)
DATE DATA
B.L.C.
FROM/TO
CAMERA
VIDEO
CP4201
Y
C
CAM.POW ON
CP4205
VF VIDEO OUT
H.SYNC
V.SYNC
FROM/TO
VIEWFINDER
Q4201
INV.
Q4211
INV.
REC MUTE
V.REC (H)
CHARACTER
FOCUS AUTO (H)
OUTDOOR (H)
INDOOR (H)
DATE DADA
B.L.C.
CAM PWR
V.SYNC
H.SYNC
VP ON (H)
V.MUTE (H)
SSB CLOCK
SSB DATA
AUDIO MUTE (L)
AV REC ST
FROM/TO
SYSCON
H.SW 2
H.SW 4
FF 25
H.SW 15
H.SW 3
H.SW 1
FSC
V.SYNC
FROM/TO
SERVO
CX4201
EXT VV Ⓗ
VP ON Ⓗ
CAM-Y
CAM-C
V.MUTE
SSB CLOCK
SSB DATA
TO
Y/C
IC4201
LB1830M
ZOOM
MOTOR DRIVER
CP4203
WIDE
TELE
FROM
OPERATION
Q5007
BIAS OSC
T5002
CP5001
FE HEAD
Q5009
INV.
Q5008
REC 5V
SW
Q5010
AUDIO
MUTE
Q5002
BIAS OSC
T5001
VR5001
BIAS
J4201
AUDIO
OUT
CP5002
AE HEAD
AUDIO HEAD (P)
AUDIO HEAD (R)
R/P HEAD GND
IC5001
BA5114F
AUDIO
REC/PB AMP
HEAD SW
IC5002
TA7361
Q5001
Q5003
LP SW

SYSTEM CONTROL BLOCK DIAGRAM

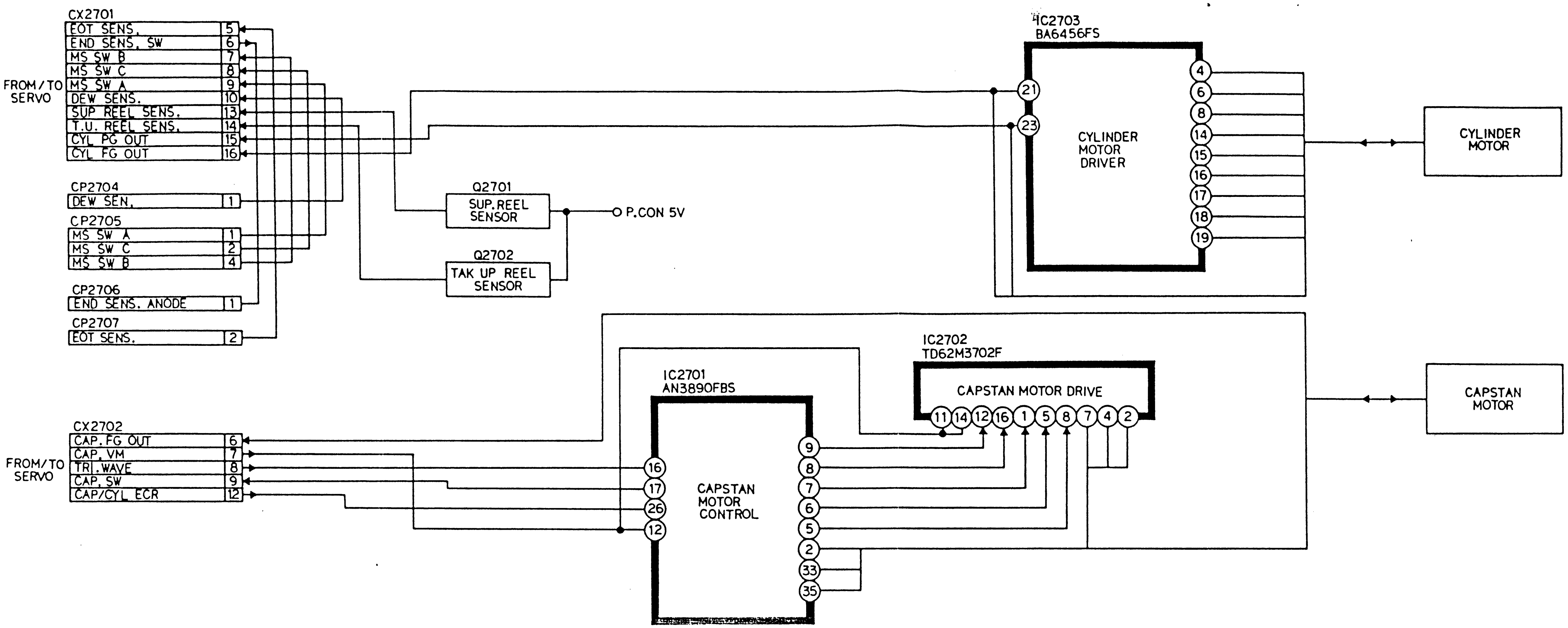


IC1005
MM1028BFF
BATTERY BACK UP
7
6
8
IC1006
S-81252-HG-RL
5V
REGULATOR
3
2
UNREG 6V
IC1003
UPD6451AGT-101
CHARACTER GEN.
2
3
4
12
13
18
19
IC004
S-8052ALO-LG
3
RESET
1
IC1002
OEC0031C
Q1005
RESET
7 RESET
Q1006
SW
40 WAKE UP
70 KEY 3
71 KEY 4
72 KEY 5
73 KEY 6
74 KEY 7
68 KEY 1
69 KEY 2
75 KEY 8
76 KEY 9
36 POWER KEY
SCK (CG) 42
STB (CG) 43
SDA (CG) 44
V.REC (H) 16
VP ON 45
V.MUTE (H) 17
A.MUTE 1 18
AV EE (H) 19
AV REC ST 20
CAM 22
WBL IN 37
WBL OUT 38
MS SW B 66
CAP STOP (H) 57
T. UP SENS 1
SUP 2
DEW SENS 35
PB CTL 25
EOT SENS 62
CYL ON 60
MS SW C 67
FOCUS AUTO 56
SDD (YC) 48
SCK (YC) 46
SENS LED 13
LD UP (H) 55
LD RFV (H) 53
REC MUTE 49
CP1003
KEY-3 2
KEY-4 3
KEY-5 4
KEY-6 5
KEY-7 6
B.L.C 7
CX1001
KEY-4 3
KEY-3 4
KEY-1 5
KEY-2 6
CX1002
KEY-7 1
KEY-8 2
KEY-9 3
POWER KEY 4
FROT/TO
OPERATION
CLOCK
SELECT
CLOCK
SET
Q1003
INV.
Q1001
SW
Q1004
INV.
Q1002
LED
DRIVE
IC1001
TA7291F
9
5
LOADING M. DRIVE
4
H. SYNC
V. SYNC
DATE DATA
CHARACTER
B.L.C.
V.REC (H)
VP ON (H)
V. MUTE (H)
A. MUTE 1
AV EE (H)
AV REC ST
CAM PWR
INDOOR (H)
OUTDOOR (H)
FOCUS AUTO
SSB DATE
SSB CLOCK
REC MUTE
FROM/TO
AUDIO/JACK
MS SW A
CAP STOP
T.UP REEL SEWS
S.UP REEL SEWS
DEW SENS
PB CTL
LOADING M.(+)
EOT SENS
END SENS SW
MS SW B
MS SW C
END SENS SW
FROM/TO
SERVO

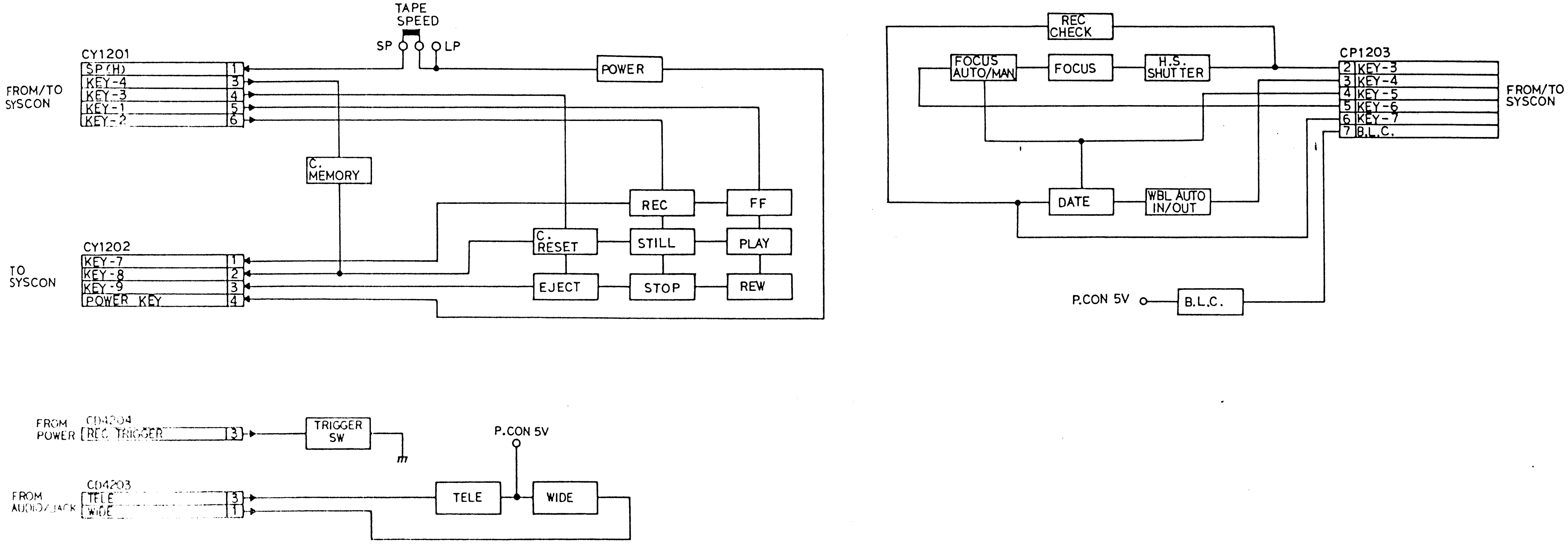
SERVO BLOCK DIAGRAM


TO
AUDIO/JACK
H. SW 4
H. SW 3
H. SW 2
H. SW 1
FF 15
FF 25
REC/PB CTL (+)
Q2001
SW
Q2002
SW
Q2003
SW
IC2003
BA10393F
WAVE SHAPE
2 2 7 6
CY2701
5 EOT SENS.
6 END SENS. SW
7 MS SW B
8 MS SW C
9 MS SW A
10 DEW SENS.
13 SUP. REEL SENS.
14 T.U. REEL SENS.
15 CYL. PG OUT
16 CYL. FG OUT
TO
MOTOR
DRIVE
43 42 41 39 31 30 29 28
PG AMP
CYL
SPEED
26
P.CON
5V
44
PG AMP
1/N
H.SW GEN.
2
AMP
1/N
CAP
SPEED
PG MM
16
VR2002
PB SW POSI
X- SHIFT
CYL. PHASE
27
33
5
CLAMP
SP/LP/EP
REC CTL
CAP
PHASE
TR MM
7
CLAMP
25 35 34 18 13 14
IC2001
OEC8026
DEW SENSOR
SUP REEL SENS.
T.U. REEL SENS.
CAP STOP
P CTL
MS SW A
MS SW C
MS SW B
END SENS. SW
EOT SENS.
TO
SYSCON
IC2002
BA10324F
13 14 8 9 10 12
ERROR AMP/
FG AMP
3 5 6 7 1 2
CY2702
6 CAP. FG OUT
7 CAP. VM
8 TRI. WAVE
9 CAP. SW
12 CAP/CYL ECR
FROM/TO
MOTOR
DRIVE
VR2001
TRACKING
FIX
VR2003
TRACKING
P.CON 5V
IC2004
TC7WU04F
3 1
INVERTER
2
5
CAP. SW
TRI. WAVE
CAP. VM
TO
POWER
SUPPLY
4 2 1
45Hz TRAP
PF2001

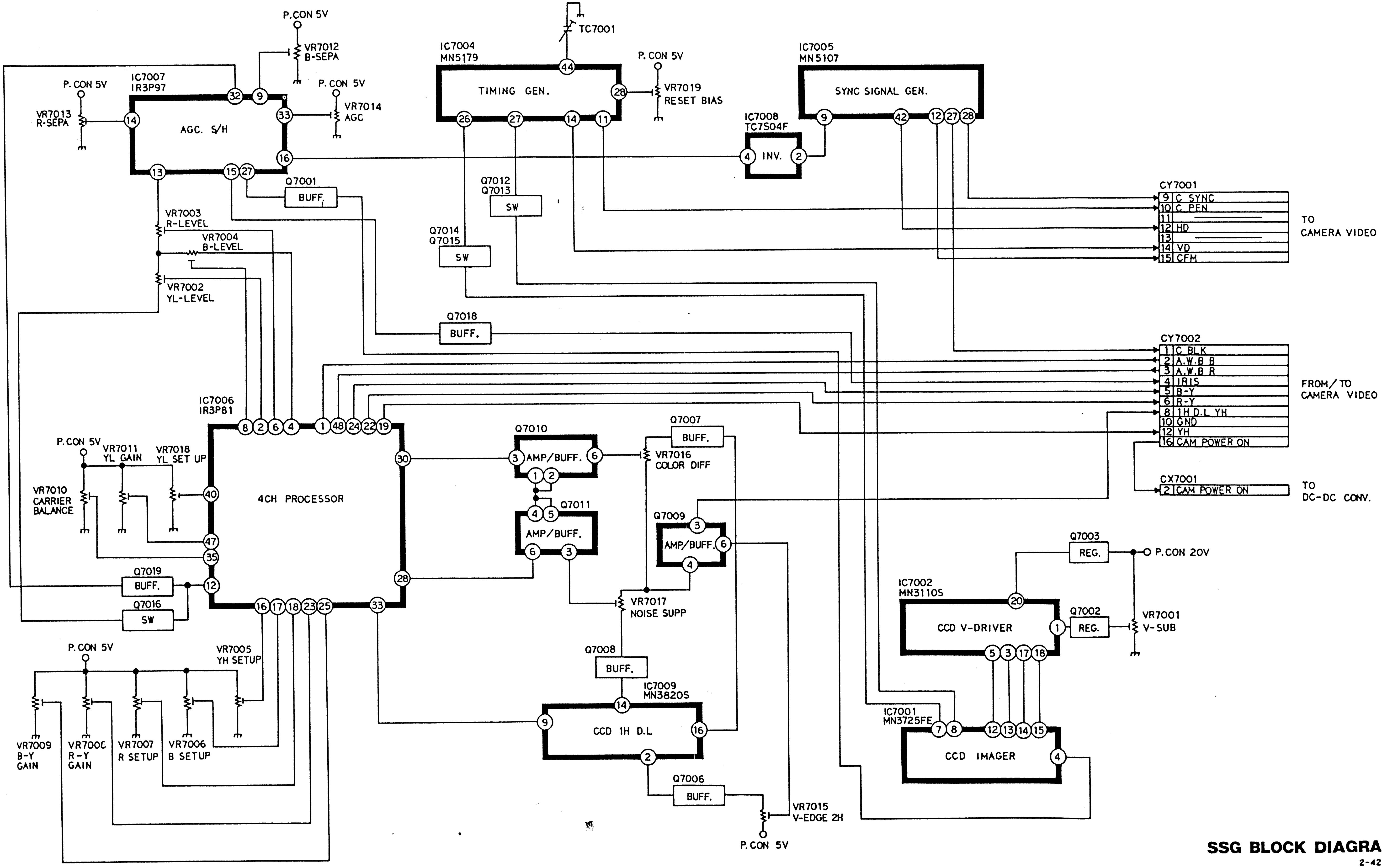
MOTOR DRIVE BLOCK DIAGRAM


CX2701
EOT SENS. 5
END SENS. SW 6
MS SW B 7
MS SW C 8
MS SW A 9
DEW SENS. 10
SUP REEL SENS. 13
T.U. REEL SENS. 14
CYL PG OUT 15
CYL FG OUT 16
FROM/TO SERVO
CP2704
DEW SEN. 1
CP2705
MS SW A 1
MS SW C 2
MS SW B 4
CP2706
END SENS. ANODE 1
CP2707
EOT SENS. 2
Q2701
SUP. REEL SENSOR
P.CON 5V
Q2702
TAK UP REEL SENSOR
IC2703
BA6456FS
CYLINDER MOTOR DRIVER
21
23
4
6
8
14
15
16
17
18
19
CYLINDER MOTOR
IC2702
TD62M3702F
CAPSTAN MOTOR DRIVE
11 14 12 16 1 5 8 7 4 2
CAPSTAN MOTOR
IC2701
AN3890FBS
CAPSTAN MOTOR CONTROL
16
17
26
12
9
8
7
6
5
2
33
35
CX2702
CAP. FG OUT 6
CAP. VM 7
TRI. WAVE 8
CAP. SW 9
CAP/CYL ECR 12
FROM/TO SERVO

OPERATION/REC SW/ZOOM SW BLOCK DIAGRAM


TAPE SPEED
SP
LP
CY1201
SP(H) 1
KEY-4 3
KEY-3 4
KEY-1 5
KEY-2 6
FROM/TO SYSCON
POWER
C. MEMORY
REC
FF
C. RESET
STILL
PLAY
EJECT
STOP
REW
CY1202
KEY-7 1
KEY-8 2
KEY-9 3
POWER KEY 4
TO SYSCON
REC CHECK
FOCUS AUTO/MAN
FOCUS
H.S. SHUTTER
DATE
WBL AUTO IN/OUT
CP1203
2 KEY-3
3 KEY-4
4 KEY-5
5 KEY-6
6 KEY-7
7 B.L.C.
FROM/TO SYSCON
P.CON 5V
B.L.C.
FROM POWER
CD4204
REC TRIGGER 3
TRIGGER SW
P.CON 5V
FROM AUDIO/JACK
CD4203
TELE 3
WIDE 1
TELE
WIDE

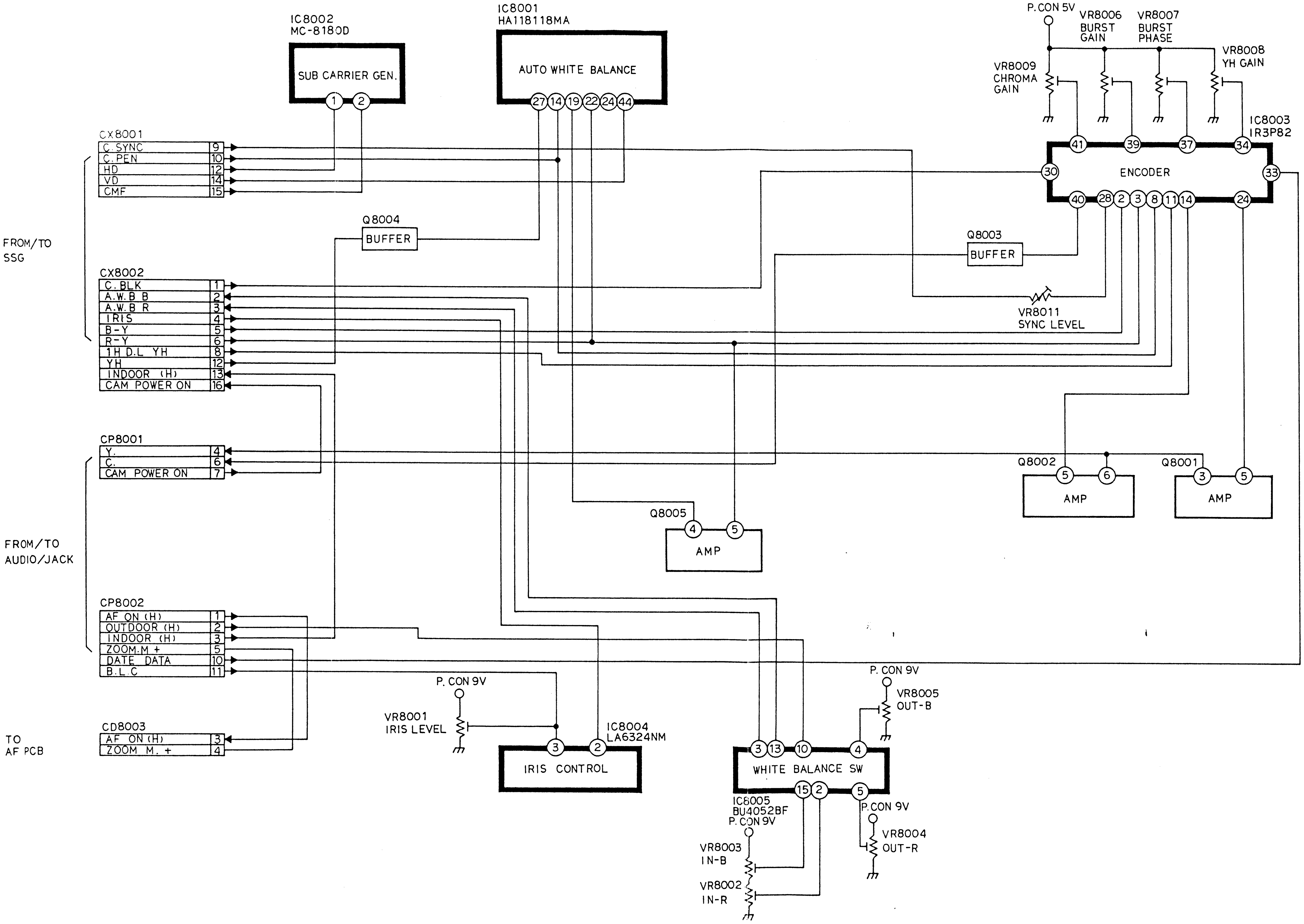
SSG BLOCK DIAGRAM


P.CON 5V
VR7012
B-SEPA
IC7004
MN5179
TC7001
P.CON 5V
IC7005
MN5107
P.CON 5V
IC7007
IR3P97
P.CON 5V
VR7014
AGC
VR7013
R-SEPA
AGC. S/H
TIMING GEN.
VR7019
RESET BIAS
SYNC SIGNAL GEN.
IC7008
TC7S04F
INV.
Q7001
BUFF.
Q7012
Q7013
SW
CY7001
9 C SYNC
10 C PEN
11
12 HD
13
14 VD
15 CFM
TO
CAMERA VIDEO
VR7003
R-LEVEL
VR7004
B-LEVEL
Q7014
Q7015
SW
VR7002
YL-LEVEL
Q7018
BUFF.
CY7002
1 C BLK
2 A.W.B B
3 A.W.B R
4 IRIS
5 B-Y
6 R-Y
8 1H D.L YH
10 GND
12 YH
16 CAM POWER ON
FROM/TO
CAMERA VIDEO
IC7006
IR3P81
Q7007
BUFF.
Q7010
AMP/BUFF.
VR7016
COLOR DIFF
P.CON 5V
VR7011
YL GAIN
VR7018
YL SET UP
VR7010
CARRIER
BALANCE
4CH PROCESSOR
Q7011
AMP/BUFF.
CX7001
2 CAM POWER ON
TO
DC-DC CONV.
Q7009
AMP/BUFF.
Q7003
REG.
P.CON 20V
Q7019
BUFF.
Q7016
SW
VR7017
NOISE SUPP
IC7002
MN3110S
CCD V-DRIVER
Q7002
REG.
VR7001
V-SUB
P.CON 5V
VR7005
YH SETUP
Q7008
BUFF.
IC7009
MN3820S
CCD 1H D.L
IC7001
MN3725FE
CCD IMAGER
VR7009
B-Y
GAIN
VR7000
R-Y
GAIN
VR7007
R SETUP
VR7006
B SETUP
Q7006
BUFF.
VR7015
V-EDGE 2H
P.CON 5V

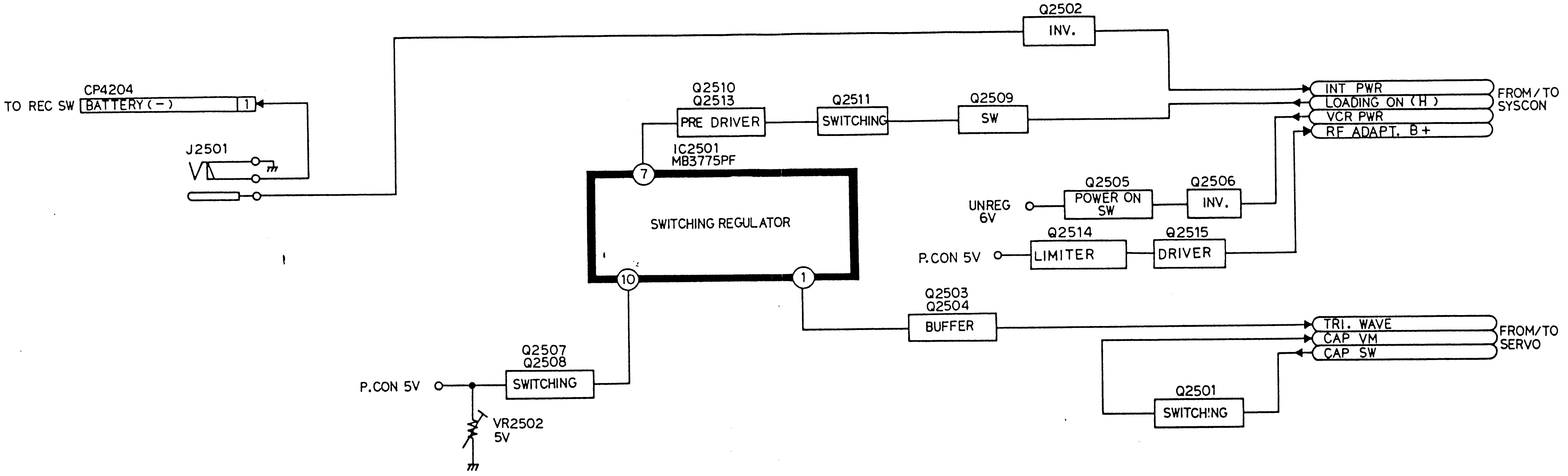
SSG BLOCK DIAGRAM

2-4273

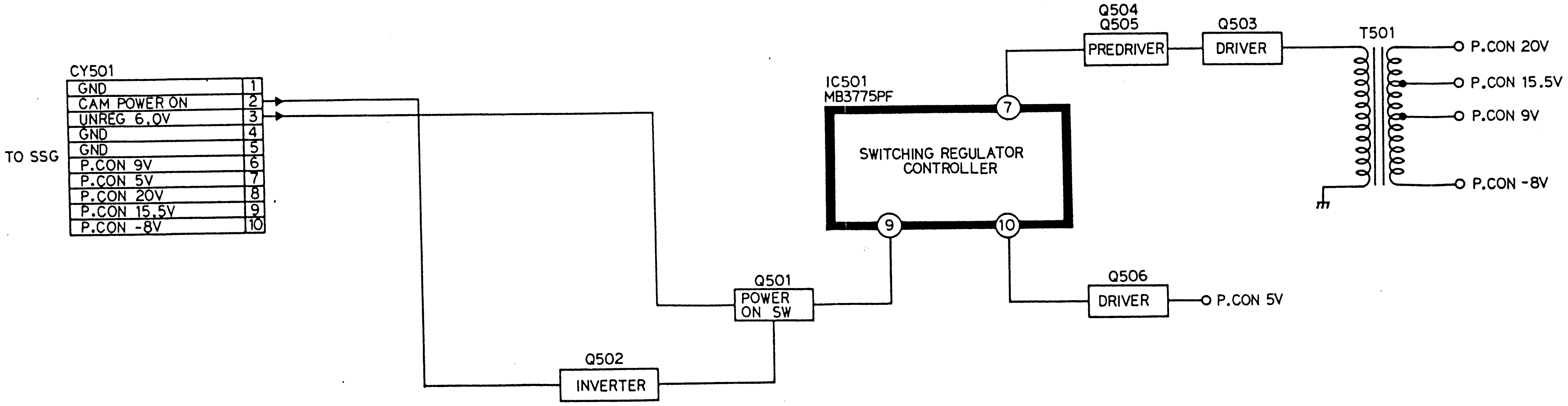
CAMERA VIDEO BLOCK DIAGRAM


IC8002
MC-8180D
SUB CARRIER GEN.
IC8001
HA118118MA
AUTO WHITE BALANCE
P.CON 5V
VR8006
BURST
GAIN
VR8007
BURST
PHASE
VR8008
YH GAIN
VR8009
CHROMA
GAIN
IC8003
IR3P82
ENCODER
CX8001
C.SYNC
C.PEN
HD
VD
CMF
FROM/TO
SSG
Q8004
BUFFER
Q8003
BUFFER
CX8002
C.BLK
A.W.B B
A.W.B R
IRIS
B-Y
R-Y
1H D.L YH
YH
INDOOR (H)
CAM POWER ON
VR8011
SYNC LEVEL
CP8001
Y
C
CAM POWER ON
Q8002
AMP
Q8001
AMP
Q8005
AMP
FROM/TO
AUDIO/JACK
CP8002
AF ON (H)
OUTDOOR (H)
INDOOR (H)
ZOOM.M +
DATE DATA
B.L.C
P. CON 9V
VR8001
IRIS LEVEL
IC8004
LA6324NM
IRIS CONTROL
VR8005
OUT-B
WHITE BALANCE SW
IC8005
BU4052BF
P. CON 9V
VR8003
IN-B
VR8002
IN-R
VR8004
OUT-R
CD8003
AF ON (H)
ZOOM M. +
TO
AF PCB

POWER SUPPLY BLOCK DIAGRAM

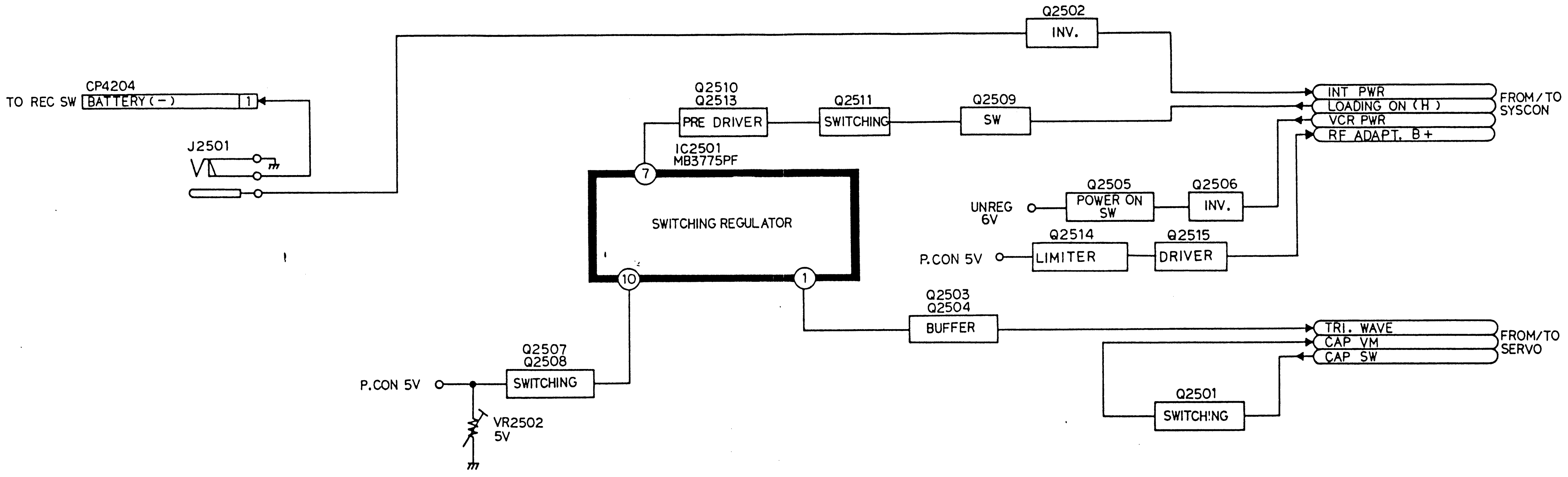

Q2502
INV.
CP4204
TO REC SW
BATTERY (−)
1
J2501
Q2510
Q2513
PRE DRIVER
Q2511
SWITCHING
Q2509
SW
IC2501
MB3775PF
7
SWITCHING REGULATOR
10
1
INT PWR
LOADING ON (H)
VCR PWR
RF ADAPT. B+
FROM/TO
SYSCON
UNREG
6V
Q2505
POWER ON
SW
Q2506
INV.
Q2514
LIMITER
Q2515
DRIVER
P.CON 5V
Q2503
Q2504
BUFFER
TRI. WAVE
CAP VM
CAP SW
FROM/TO
SERVO
Q2507
Q2508
SWITCHING
P.CON 5V
VR2502
5V
Q2501
SWITCHING

DC-DC CONVERTER BLOCK DIAGRAM

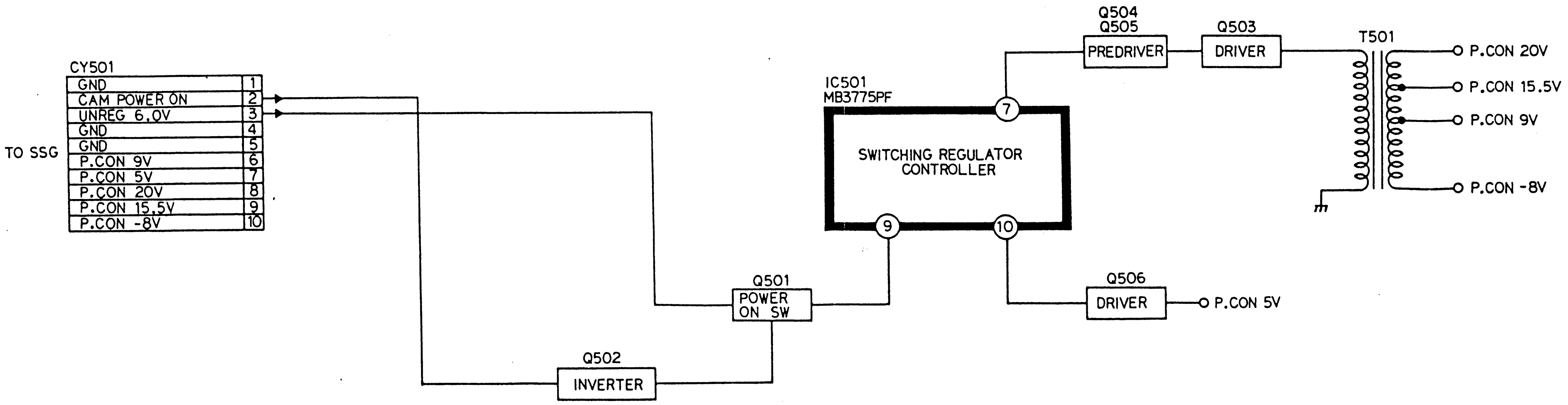

Q504
Q505
PREDRIVER
Q503
DRIVER
T501
P.CON 20V
P.CON 15.5V
P.CON 9V
P.CON -8V
CY501
GND 1
CAM POWER ON 2
UNREG 6.0V 3
GND 4
GND 5
P.CON 9V 6
P.CON 5V 7
P.CON 20V 8
P.CON 15.5V 9
P.CON -8V 10
TO SSG
IC501
MB3775PF
7
SWITCHING REGULATOR
CONTROLLER
9
10
Q501
POWER
ON SW
Q506
DRIVER
P.CON 5V
Q502
INVERTER

2-4223

POWER SUPPLY BLOCK DIAGRAM

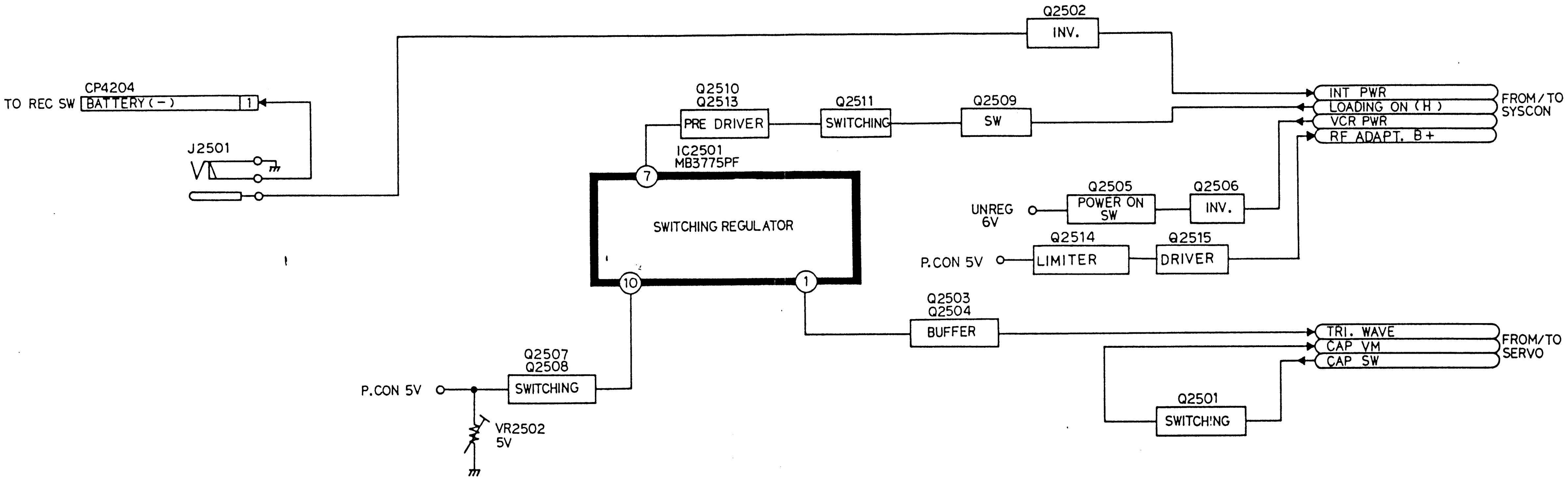

Q2502
INV.
CP4204
TO REC SW
BATTERY (−)
1
J2501
Q2510
Q2513
PRE DRIVER
Q2511
SWITCHING
Q2509
SW
IC2501
MB3775PF
7
SWITCHING REGULATOR
10
1
INT PWR
LOADING ON (H)
VCR PWR
RF ADAPT. B+
FROM/TO SYSCON
UNREG 6V
Q2505
POWER ON SW
Q2506
INV.
P.CON 5V
Q2514
LIMITER
Q2515
DRIVER
Q2503
Q2504
BUFFER
TRI. WAVE
CAP VM
CAP SW
FROM/TO SERVO
Q2507
Q2508
SWITCHING
P.CON 5V
VR2502
5V
Q2501
SWITCHING

DC-DC CONVERTER BLOCK DIAGRAM

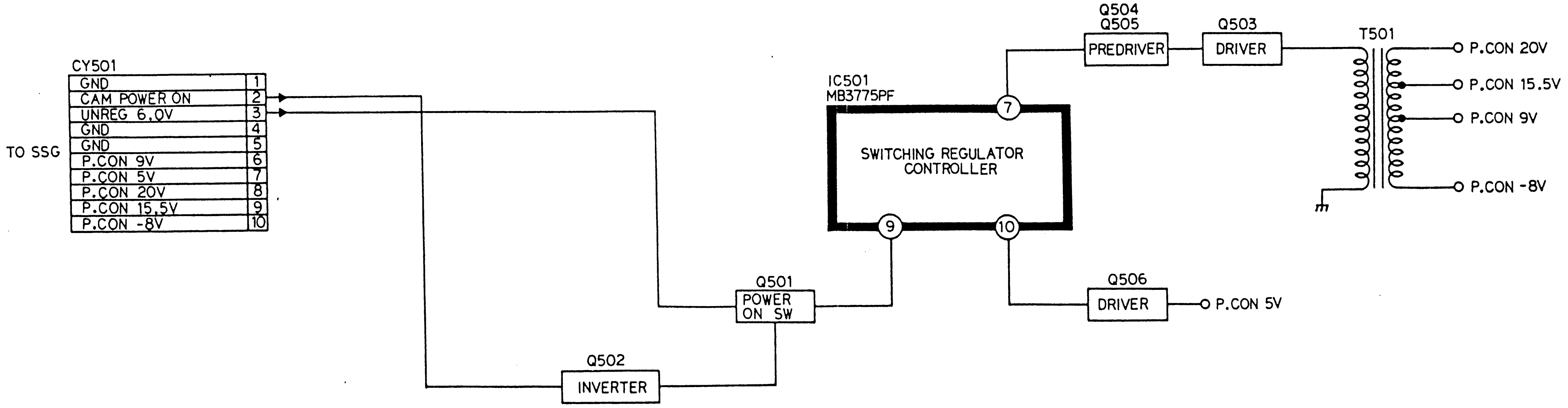

CY501
TO SSG
GND 1
CAM POWER ON 2
UNREG 6.0V 3
GND 4
GND 5
P.CON 9V 6
P.CON 5V 7
P.CON 20V 8
P.CON 15.5V 9
P.CON -8V 10
IC501
MB3775PF
SWITCHING REGULATOR CONTROLLER
7
9
10
Q504
Q505
PREDRIVER
Q503
DRIVER
T501
P.CON 20V
P.CON 15.5V
P.CON 9V
P.CON -8V
Q501
POWER ON SW
Q502
INVERTER
Q506
DRIVER
P.CON 5V

2-4223

POWER SUPPLY BLOCK DIAGRAM

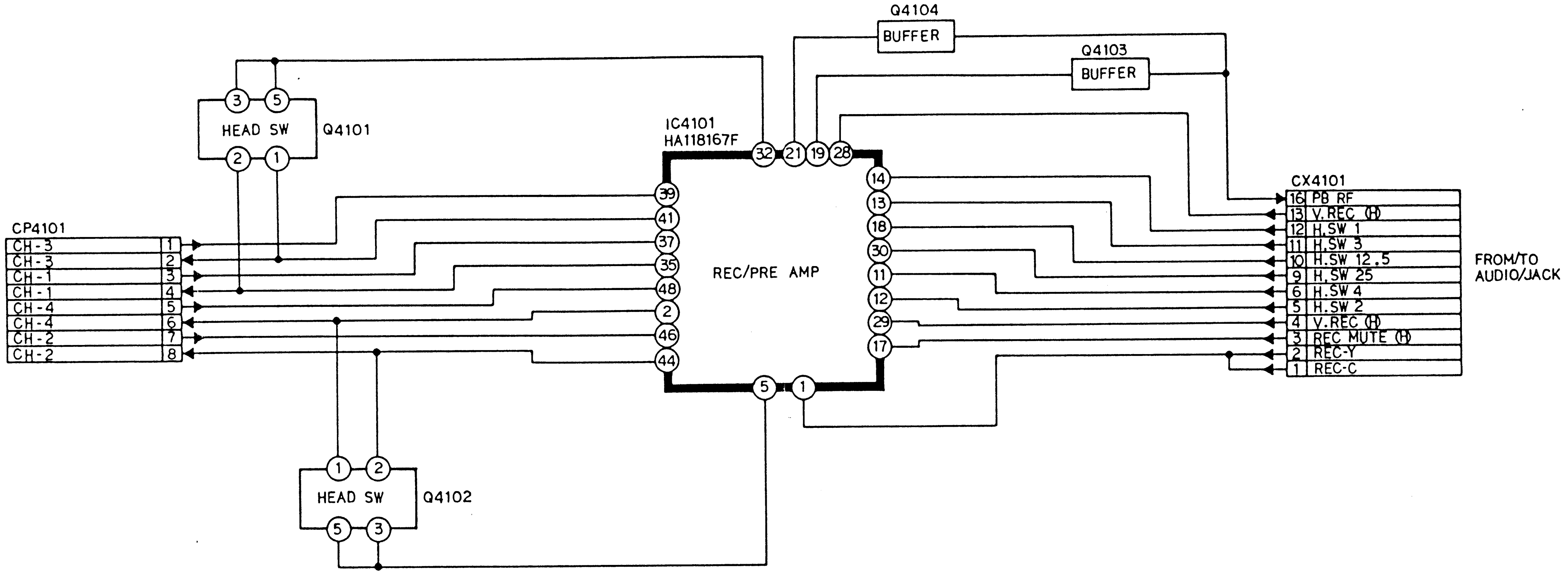

Q2502
INV.
CP4204
TO REC SW
BATTERY(−)
1
J2501
Q2510
Q2513
PRE DRIVER
Q2511
SWITCHING
Q2509
SW
IC2501
MB3775PF
7
SWITCHING REGULATOR
10
1
INT PWR
LOADING ON (H)
VCR PWR
RF ADAPT. B+
FROM/TO
SYSCON
UNREG
6V
Q2505
POWER ON
SW
Q2506
INV.
P.CON 5V
Q2514
LIMITER
Q2515
DRIVER
Q2503
Q2504
BUFFER
TRI. WAVE
CAP VM
CAP SW
FROM/TO
SERVO
Q2507
Q2508
SWITCHING
P.CON 5V
VR2502
5V
Q2501
SWITCHING

DC-DC CONVERTER BLOCK DIAGRAM


CY501
GND
CAM POWER ON
UNREG 6.0V
GND
GND
P.CON 9V
P.CON 5V
P.CON 20V
P.CON 15.5V
P.CON -8V
1
2
3
4
5
6
7
8
9
10
TO SSG
IC501
MB3775PF
7
SWITCHING REGULATOR
CONTROLLER
9
10
Q504
Q505
PREDRIVER
Q503
DRIVER
T501
P.CON 20V
P.CON 15.5V
P.CON 9V
P.CON -8V
Q501
POWER
ON SW
Q502
INVERTER
Q506
DRIVER
P.CON 5V

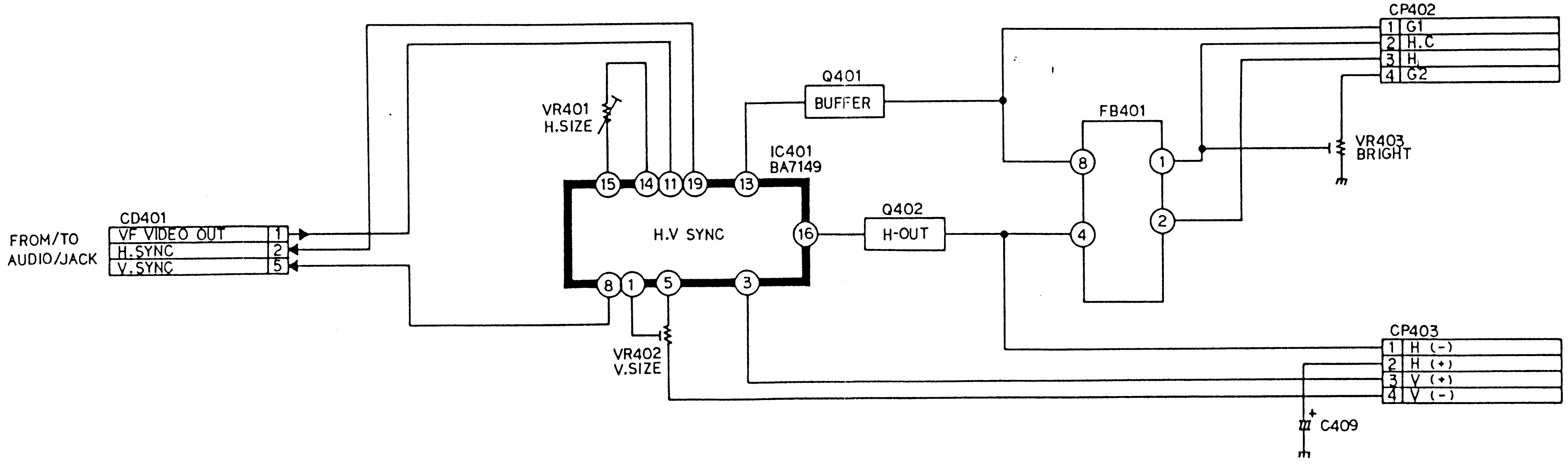
2-4223

HEAD AMP BLOCK DIAGRAM



Q4104
BUFFER
Q4103
BUFFER
3
5
HEAD SW
2
1
Q4101
IC4101
HA118167F
32
21
19
28
REC/PRE AMP
39
41
37
35
48
2
46
44
14
13
18
30
11
12
29
17
5
1
CP4101
1 CH-3
2 CH-3
3 CH-1
4 CH-1
5 CH-4
6 CH-4
7 CH-2
8 CH-2
CX4101
16 PB RF
13 V.REC Ⓗ
12 H.SW 1
11 H.SW 3
10 H.SW 12.5
9 H.SW 25
6 H.SW 4
5 H.SW 2
4 V.REC Ⓗ
3 REC MUTE Ⓗ
2 REC-Y
1 REC-C
FROM/TO
AUDIO/JACK
1
2
HEAD SW
Q4102
5
3

VIEWFINDER BLOCK DIAGRAM

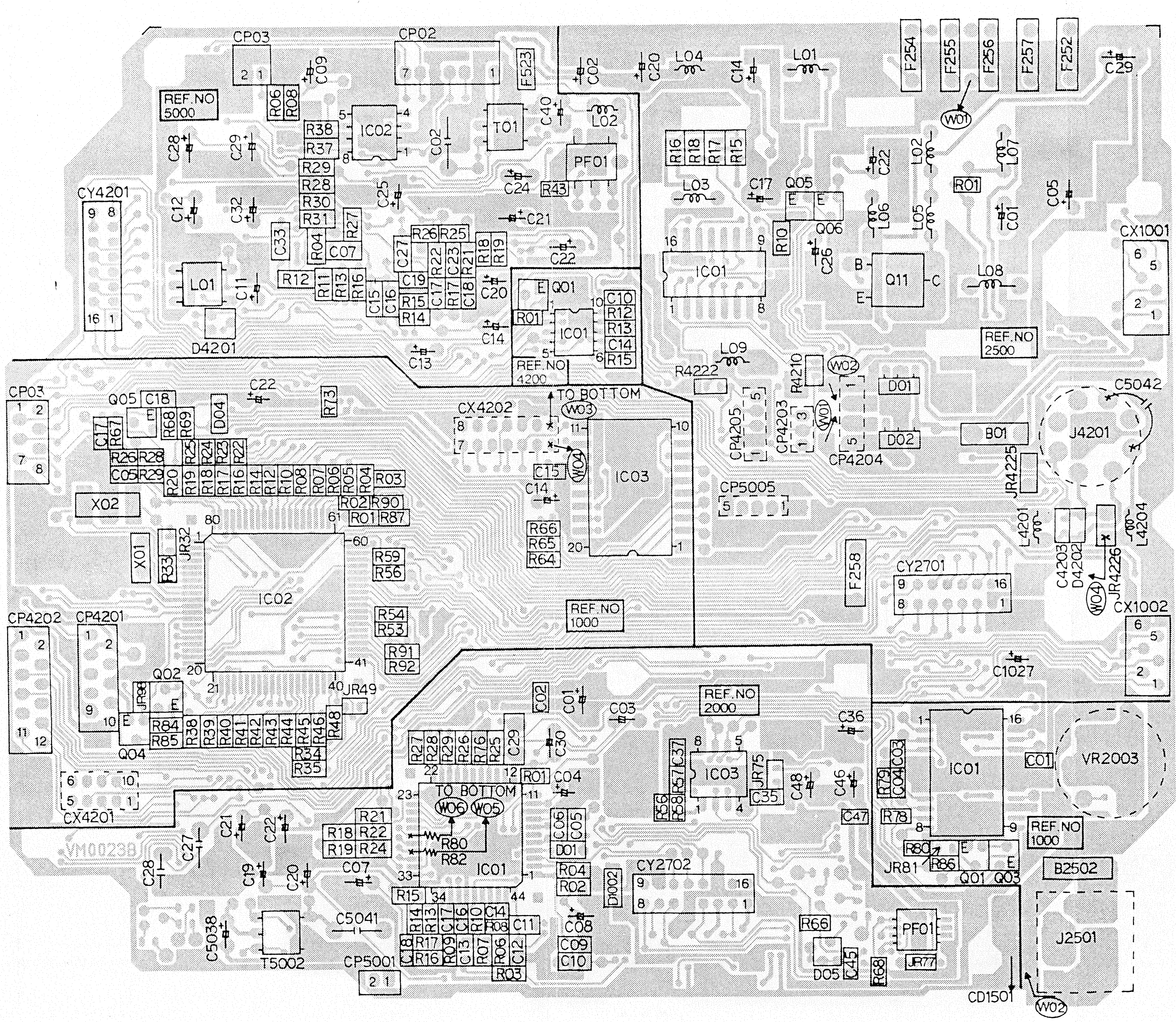


FROM/TO
AUDIO/JACK
CD401
1 VF VIDEO OUT
2 H.SYNC
5 V.SYNC
VR401
H.SIZE
15
14
11
19
13
IC401
BA7149
H.V SYNC
16
8
1
5
3
VR402
V.SIZE
Q401
BUFFER
Q402
H-OUT
FB401
8
1
4
2
CP402
1 G1
2 H.C
3 H
4 G2
VR403
BRIGHT
CP403
1 H (-)
2 H (+)
3 V (+)
4 V (-)
C409

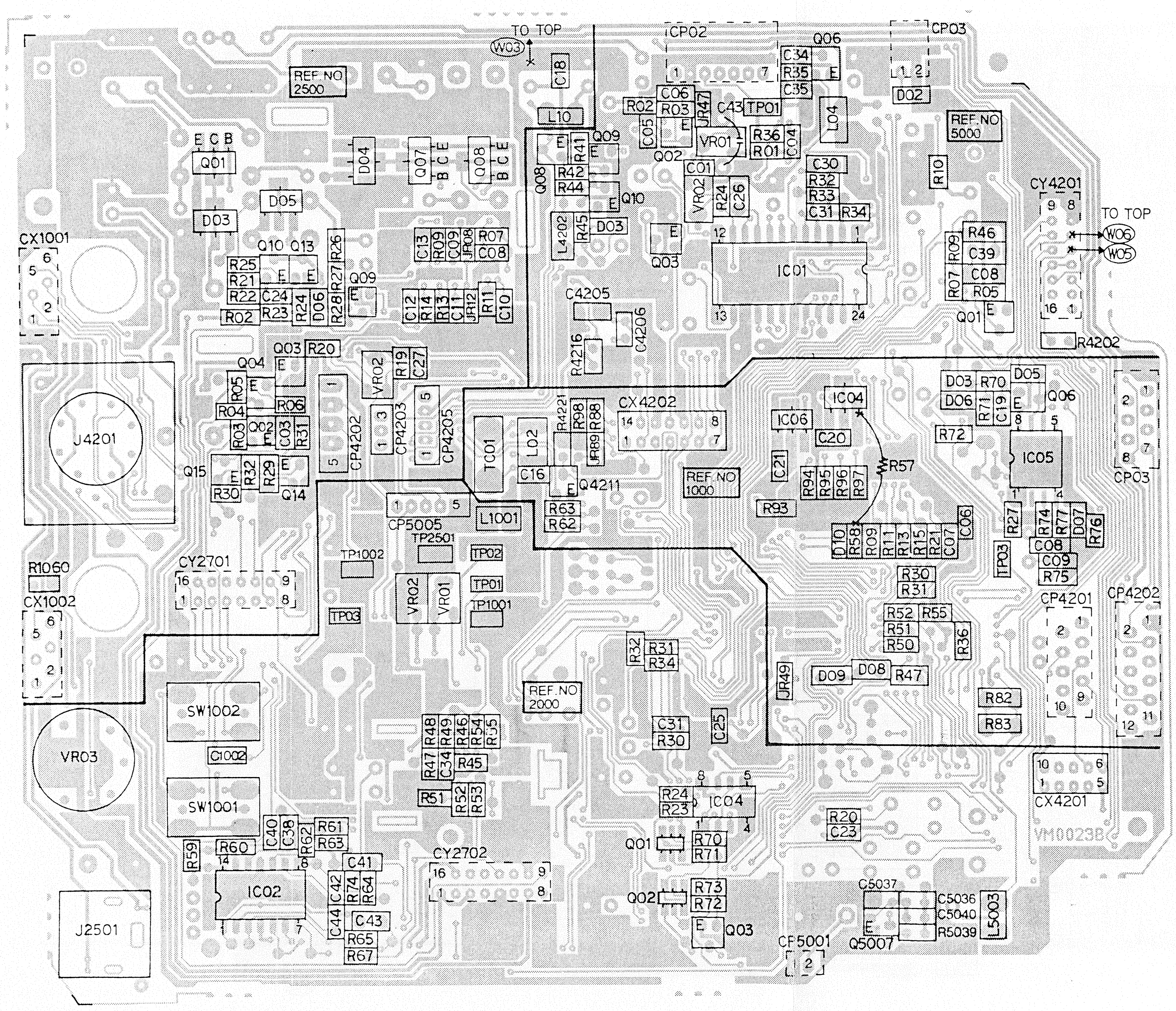
PRINTED CIRCUIT BOARD

MAIN

TOP


CP03
CP02
F523
C09
REF.NO
5000
R06
R08
IC02
R38
R37
R29
R28
R30
R31
R27
C33
R04
C07
C02
T01
C40
L02
PF01
C24
R43
C21
C22
C25
C28
C29
C12
C32
CY4201
L01
C11
D4201
R12
R11
R13
R16
C15
C16
R15
R14
C27
R26
R25
R22
C19
C17
R17
C23
R21
C18
R18
R19
C20
Q01
R01
IC01
C10
R12
R13
C14
R15
C13
REF.NO
4200
C02
C20
L04
C14
L01
F254
F255
F256
F257
F252
C29
W01
R16
R18
R17
R15
L03
C17
Q05
C22
L02
L07
R01
C05
C01
L06
L05
Q06
R10
C26
IC01
Q11
L08
CX1001
REF.NO
2500
L09
R4222
R4210
W02
D01
CP4205
CP4203
W01
CP4204
D02
B01
C5042
J4201
JR4225
CP03
Q05
C18
C22
R73
C17
R67
R68
R69
D04
R26
R28
C05
R29
R20
R19
R18
R17
R16
R14
R12
R10
R08
R07
R06
R05
R04
R03
R02
R90
R01
R87
CX4202
TO BOTTOM
W03
IC03
C15
W04
C14
R66
R65
R64
CP5005
L4201
L4204
C4203
D4202
JR4226
W04
X02
X01
JR32
R33
IC02
R59
R56
R54
R53
R91
R92
REF.NO
1000
F258
CY2701
CX1002
C1027
CP4202
CP4201
Q02
JR49
R48
R84
R85
R38
R39
R40
R41
R42
R43
R44
R45
R46
R34
R35
Q04
CX4201
VM0023B
C02
C01
C03
REF.NO
2000
C36
IC01
C01
VR2003
R27
R28
R29
R26
R76
R25
C29
C30
R01
C04
TO BOTTOM
W06
W05
IC03
JR75
C35
C48
C46
R56
R58
R57
C37
R79
C04
C03
C47
R78
R21
R18
R22
R19
R24
R80
R82
IC01
C06
C05
D01
R04
R02
D1002
CY2702
R80
R86
JR81
Q01
Q03
REF.NO
1000
B2502
C21
C22
C27
C28
C19
C20
C07
R15
R14
R13
C17
C16
R10
C14
R09
C13
R08
C11
R07
R06
C12
R03
R17
R16
C18
C08
C09
C10
C5038
T5002
C5041
CP5001
R66
PF01
D05
C45
R68
JR77
J2501
CD1501
W02

PRINTED CIRCUIT BOARD
MAIN
BOTTOM



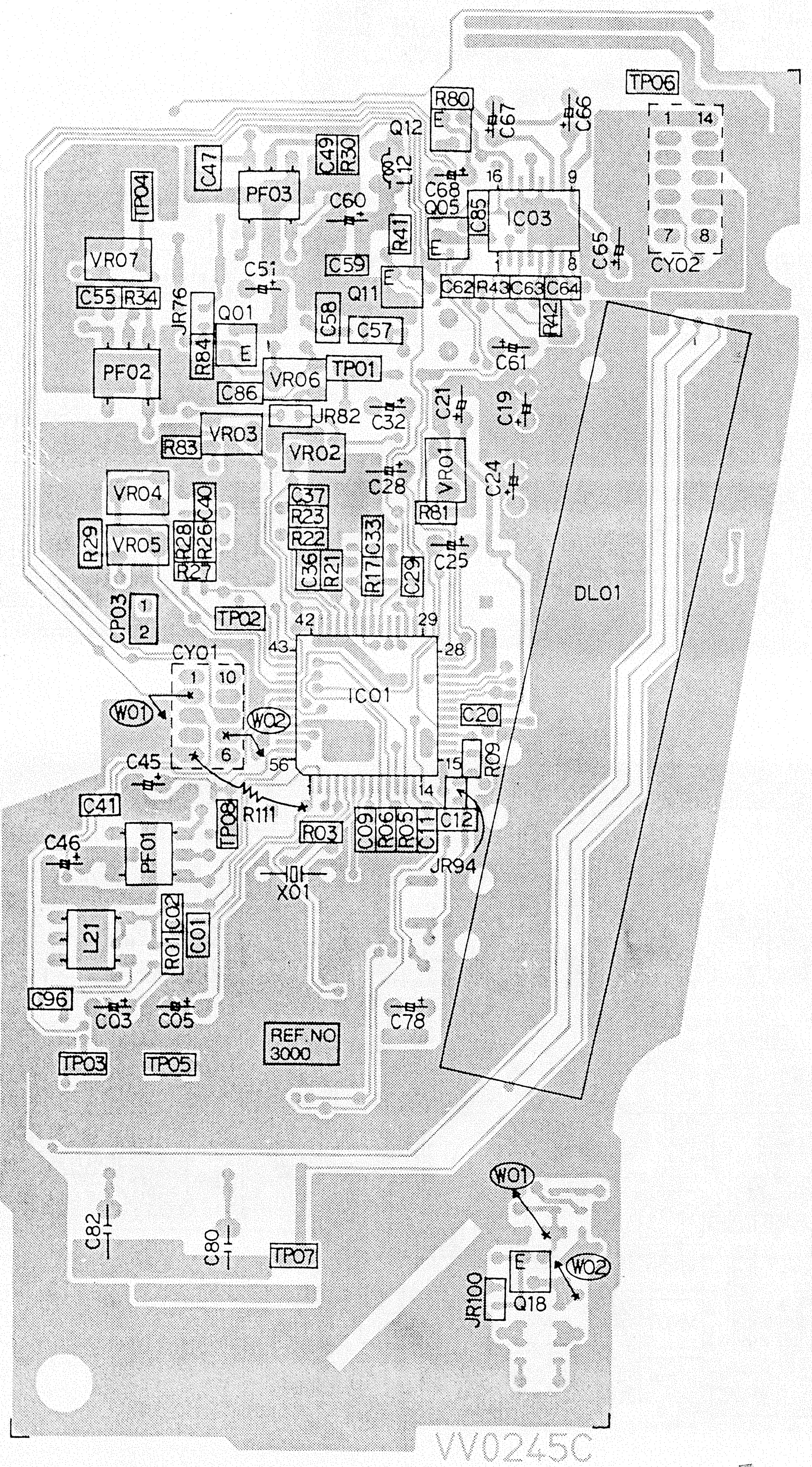
TO TOP
W03
CP02
Q06
CP03
REF.NO 2500
C18
C34
R35
C35
D02
L10
R02
R03
C06
JR47
C43
TP01
L04
REF.NO 5000
E C B
Q01
D04
Q07
B C E
Q08
Q09
R41
C05
Q02
VR01
R36
R01
C04
C30
R32
R33
C31
R34
R10
CY4201
R42
R44
C01
VR02
R24
C26
Q10
D05
D03
CX1001
Q10 Q13
R26
C13
R09
C09
JR08
R07
C08
L4202
R45
Q03
IC01
R46
C39
C08
R05
R07
R09
Q01
TO TOP
W06
W05
R25
R21
R22
C24
R23
R02
R24
D06
R28
R27
Q09
C12
R14
R13
C11
JR12
R11
C10
C4205
C4206
R4216
R4202
Q03
R20
Q04
R19
C27
R05
R04
R06
R03
Q02
C03
R31
CP4202
CP4203
CP4205
TC01
L02
R4221
R98
R88
JR89
CX4202
IC04
IC06
C20
D03
R70
D05
D06
R71
C19
Q06
R72
IC05
CP03
J4201
Q15
R32
R29
R30
Q14
C16
Q4211
REF.NO 1000
C21
R94
R95
R96
R97
R57
R93
CP5005
L1001
R63
R62
TP2501
D10
R58
R09
R11
R13
R15
R21
C07
C06
R27
R74
R77
D07
R76
C08
C09
R75
TP03
R1060
CY2701
TP1002
TP02
TP01
TP1001
VR02
VR01
TP03
CX1002
R30
R31
R52
R55
R51
R50
R36
CP4201
CP4202
R32
R31
R34
JR49
D09
D08
R47
R82
R83
REF.NO 2000
SW1002
C1002
R48
R49
R46
R54
R55
R47
C34
R45
R51
R52
R53
C31
R30
C25
VR03
SW1001
R24
R23
IC04
CX4201
VM0023B
R20
C23
C40
C38
R62
R61
R63
R59
R60
IC02
C41
C42
R74
R64
C44
C43
R65
R67
CY2702
Q01
R70
R71
Q02
R73
R72
Q03
C5037
C5036
C5040
R5039
L5003
Q5007
CF5001
J2501

PRINTED CIRCUIT BOARD

PRINTED CIRCUIT BOARDS

Y.C.

TOP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R80
C67
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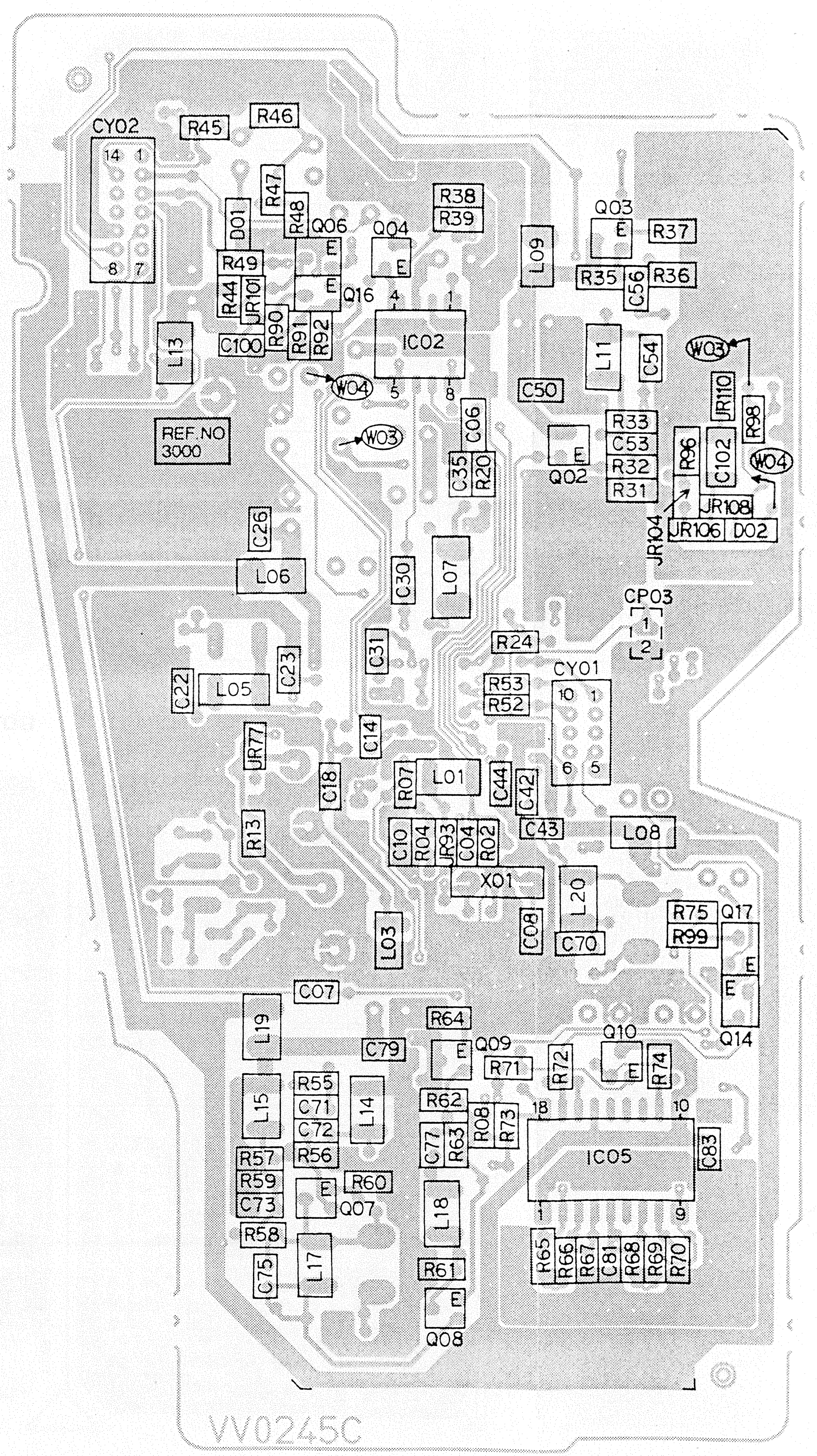
C49
R30
L12
C47
TP04
PF03
C60
C68
Q05
C85
IC03
16
9
1
8
1
14
7
8
CY02
VR07
C59
R41
C65
C55
R34
C51
JR76
Q01
E
C62
R43
C63
C64
R42
Q11
C58
C57
R84
C61
PF02
C86
VR06
TP01
C21
C19
JR82
C32
R83
VR03
VR02
C28
VR01
C24
VR04
C40
C37
R23
R22
R28
R26
R27
R29
VR05
C36
R21
R17
C33
C29
R81
C25
DL01
CP03
1
2
TP02
42
29
43
28
CY01
1
10
W01
W02
IC01
C20
R09
C45
6
56
15
14
C41
R111
TP08
R03
C09
R06
R05
C11
C12
C46
PF01
JR94
X01
L21
R01
C02
C01
C96
C03
C05
REF.NO
3000
C78
TP03
TP05
W01
C82
C80
TP07
W02
E
JR100
Q18
VV0245C

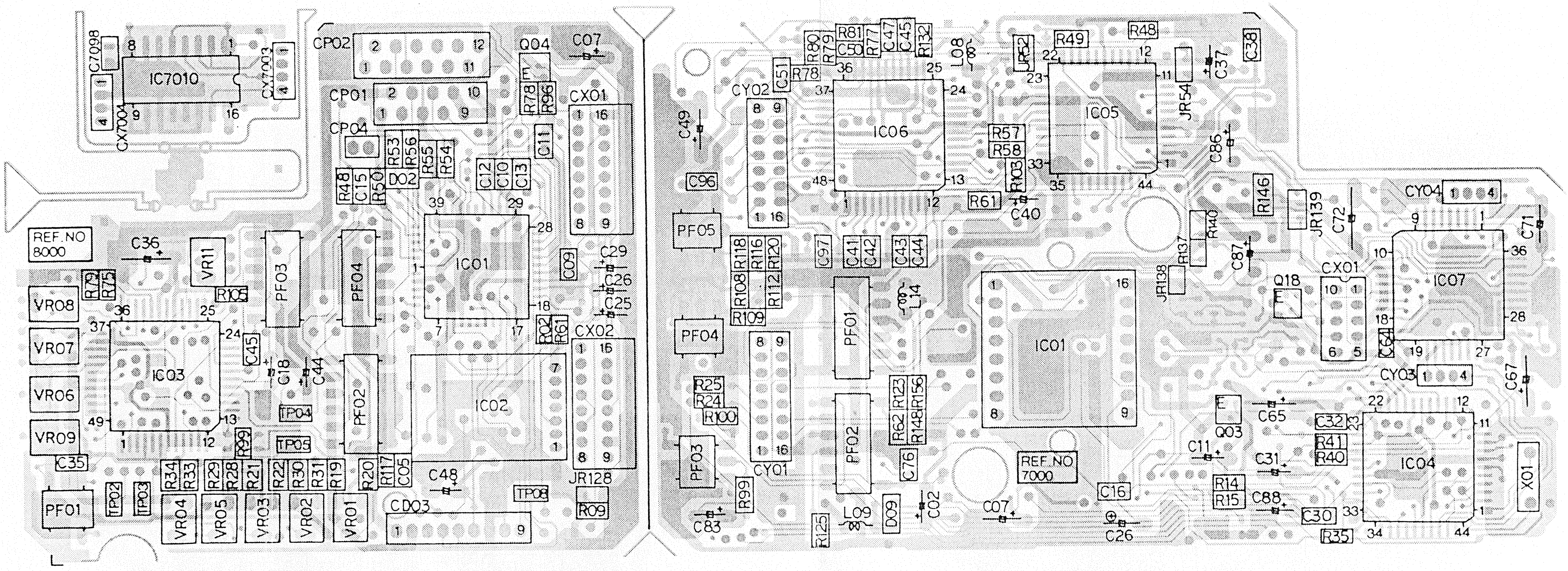
BOTTOM


CY02
14
1
8
7
R45
R46
R47
R48
D01
R38
R39
Q06
Q04
Q03
E
R37
L09
R49
R44
JR101
Q16
4
1
R35
C56
R36
R90
R91
R92
IC02
C100
L13
L11
C54
W03
W04
5
8
C50
JR110
R98
REF.NO
3000
W03
C06
R33
C53
R32
R31
Q02
R96
C102
W04
C35
R20
JR108
JR104
JR106
D02
C26
L06
C30
L07
CP03
1
2
R24
C31
CY01
10
1
6
5
R53
R52
C22
L05
C23
C14
JR77
C18
R07
L01
C44
C42
C43
L08
R13
C10
R04
JR93
C04
R02
X01
L20
R75
Q17
R99
C08
C70
L03
C07
L19
R64
Q09
Q10
C79
R71
R72
R74
Q14
R55
C71
C72
L15
L14
R62
R08
R73
18
10
IC05
C83
C77
R63
R57
R56
R59
R60
C73
Q07
L18
R58
1
9
L17
R65
R66
R67
C81
R68
R69
R70
C75
R61
Q08
VV0245C

PRINTED CIRCUIT BOARDS

CAMERA VIDEO/SUB CAMERA/SSG

TOP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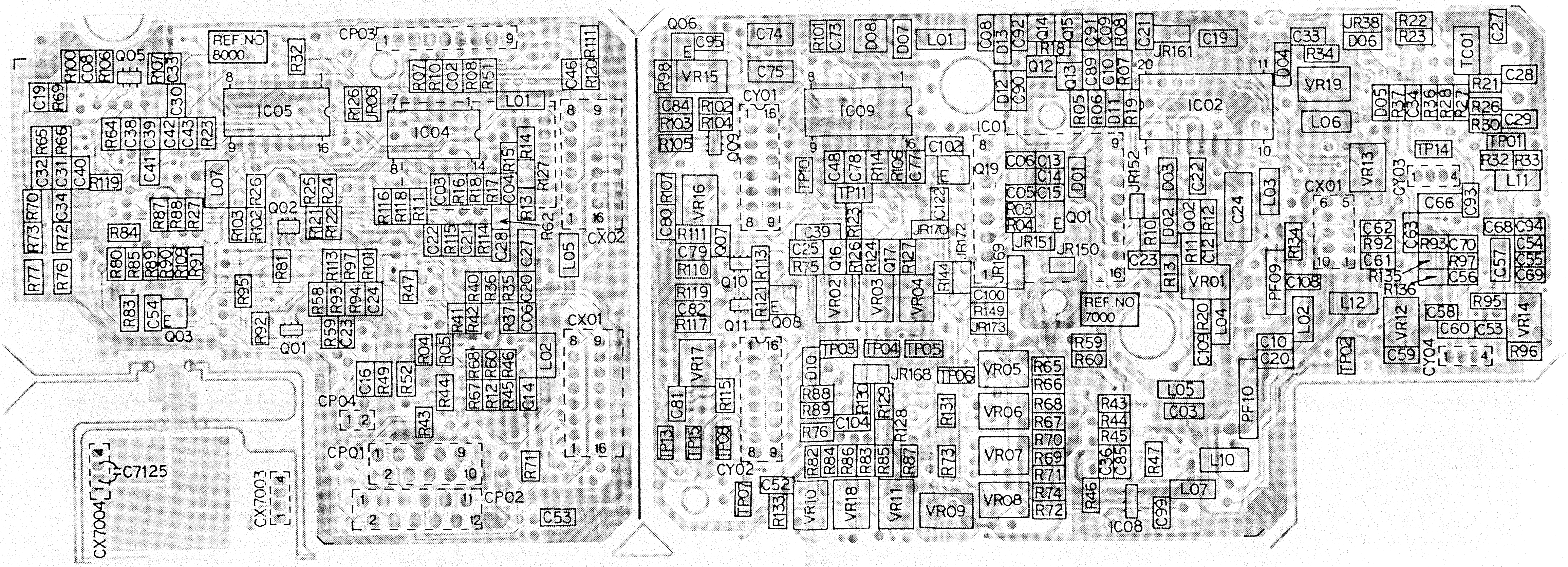
IC7010
CX7003
CX7004
C7098
CP02
CP01
CP04
Q04
C07
CX01
CX02
IC01
IC02
IC03
PF01
PF02
PF03
PF04
VR01
VR02
VR03
VR04
VR05
VR06
VR07
VR08
VR09
VR11
CD03
JR128
TP02
TP03
TP04
TP05
TP08
C36
C48
CY01
CY02
IC06
IC05
IC01
IC04
IC07
PF01
PF02
PF03
PF04
PF05
CY03
CY04
CX01
Q18
Q03
X01
REF.NO 7000
L08
L09
L14
JR52
JR54
JR138
JR139

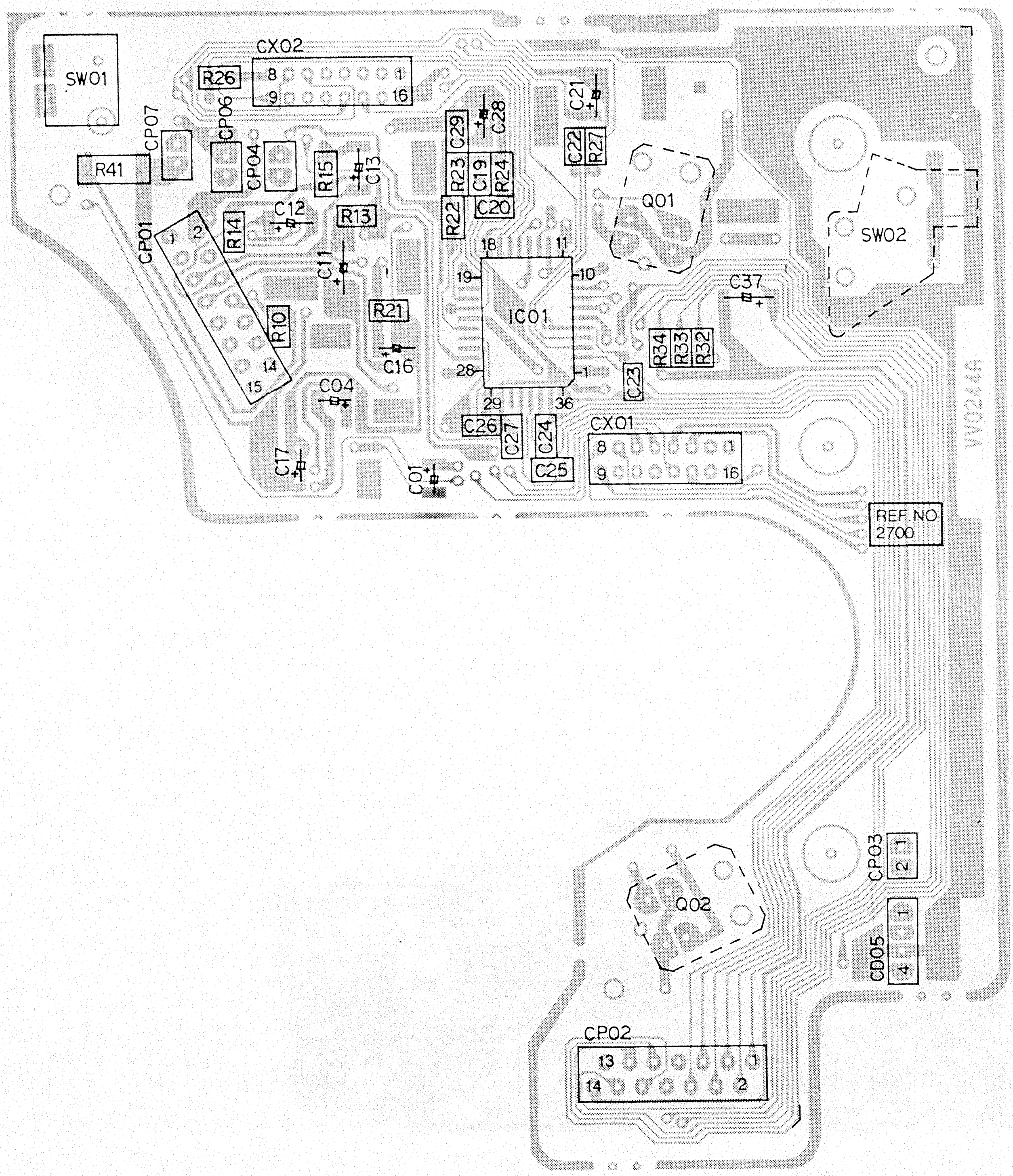
BOTTOM


REF.NO 8000
CP03
IC05
IC04
Q05
Q02
Q03
Q01
CX01
CX02
CP04
CP01
CP02
C7125
CX7003
CX7004
L01
L05
L07
Q06
VR15
VR16
VR17
VR18
CY01
CY02
IC09
IC01
IC02
IC08
Q19
Q01
Q16
Q17
Q10
Q11
Q08
VR02
VR03
VR04
VR05
VR06
VR07
VR08
VR09
VR10
VR11
VR12
VR13
VR14
VR19
REF.NO 7000
CX01
CY03
CY04
TC01
TP01
TP02
TP03
TP04
TP05
TP06
TP07
TP08
TP10
TP11
TP13
TP14
TP15
L01
L02
L03
L04
L05
L06
L07
L10
L11
L12
PF09
PF10

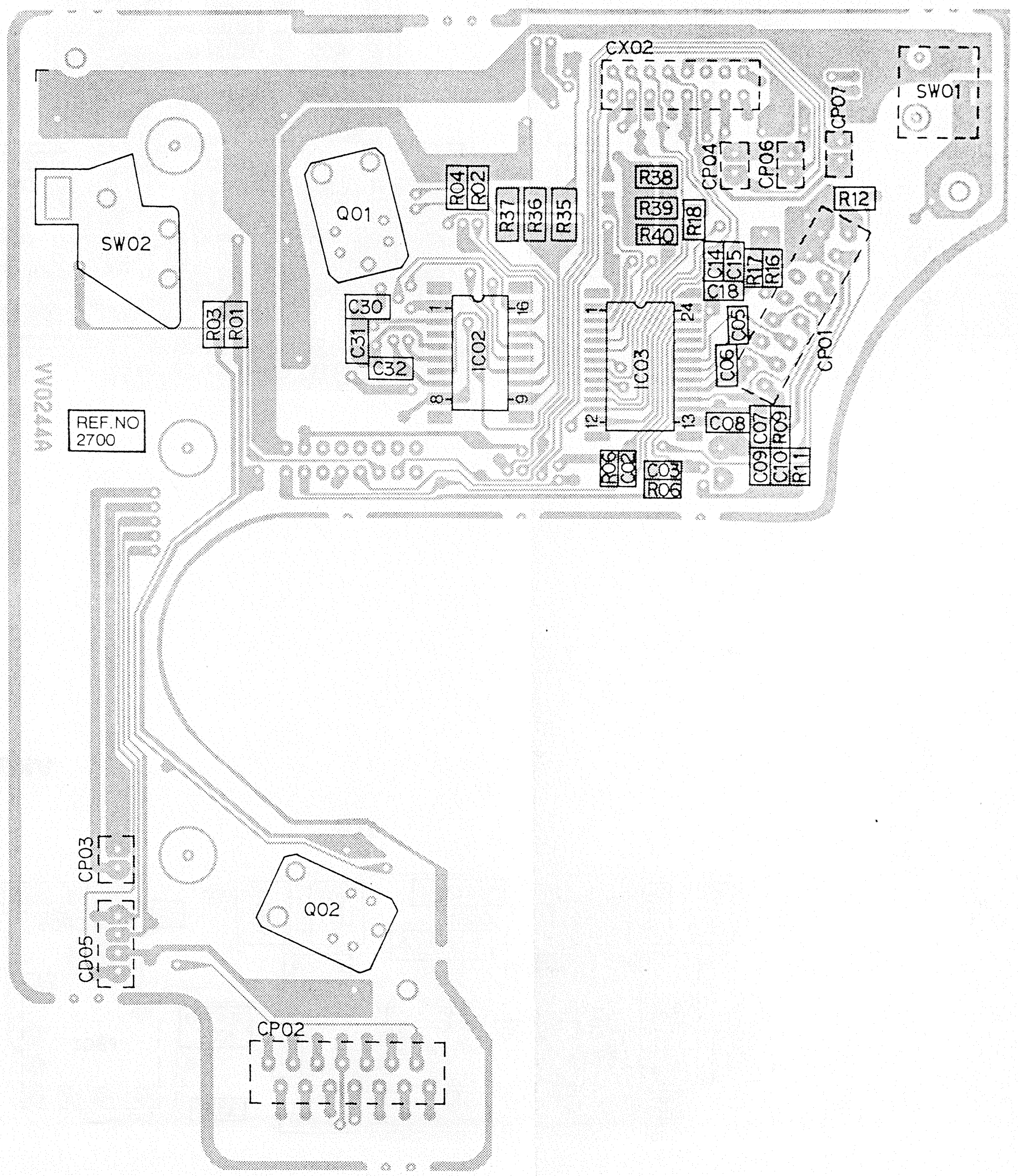
PRINTED CIRCUIT BOARDS

MDA

TOP


SW01
CX02
R26
8
9
1
16
CP07
CP06
CP04
R41
R15
C13
C12
R13
R14
CP01
1
2
C11
R21
R10
C16
14
15
C04
C17
C01
C29
C28
C21
R23
C19
R24
C22
R27
R22
C20
Q01
SW02
18
11
19
10
IC01
28
1
29
36
C37
R34
R33
R32
C23
C26
C27
C24
C25
CX01
8
1
9
16
REF.NO
2700
VV0244A
Q02
CP03
2
1
1
CD05
4
CP02
13
1
14
2

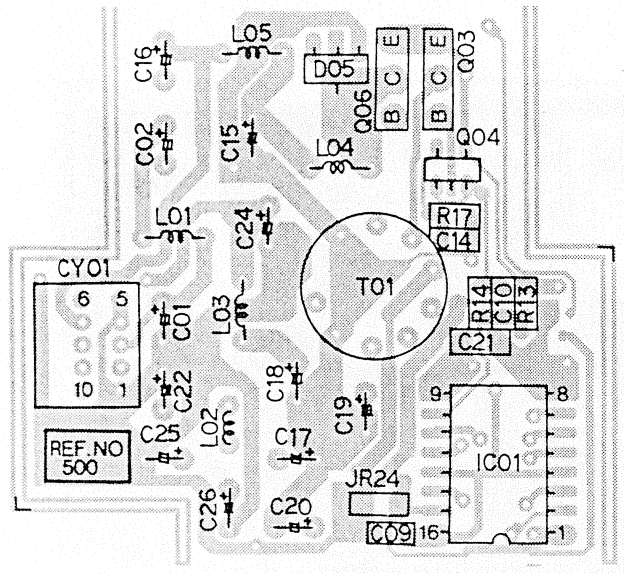
BOTTOM


CX02
SW01
CP07
CP04
CP06
R38
R39
R40
R18
R12
Q01
R04
R02
R37
R36
R35
SW02
C14
C15
R17
R16
C18
C30
C31
C32
1
16
IC02
8
9
1
24
IC03
12
13
C05
C06
CP01
R03
R01
VV0244A
REF.NO
2700
C08
C07
C09
C10
R09
R11
R05
C02
C03
R06
CP03
CD05
Q02
CP02

PRINTED CIRCUIT BOARDS

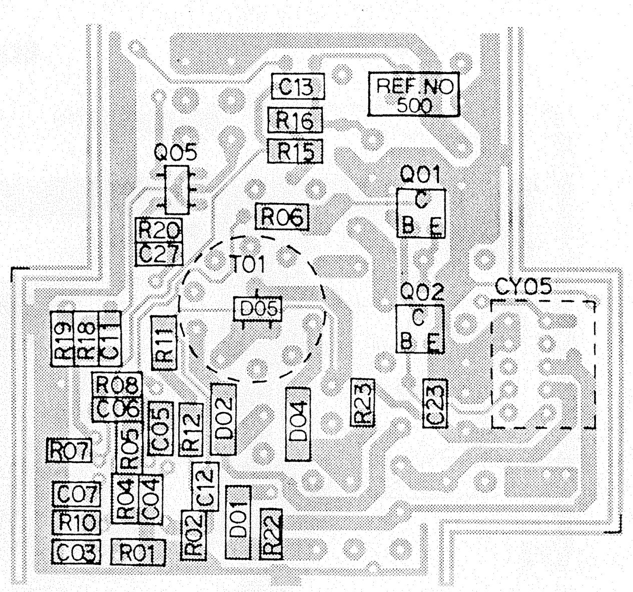
DC-DC CONVERTER

TOP



L05
D05
Q06
Q03
C16
C02
C15
L04
Q04
L01
C24
R17
C14
CY01
T01
R14
R10
R13
C21
C01
L03
C22
C18
C19
REF.NO 500
C25
L02
C17
JR24
IC01
C26
C20
C09

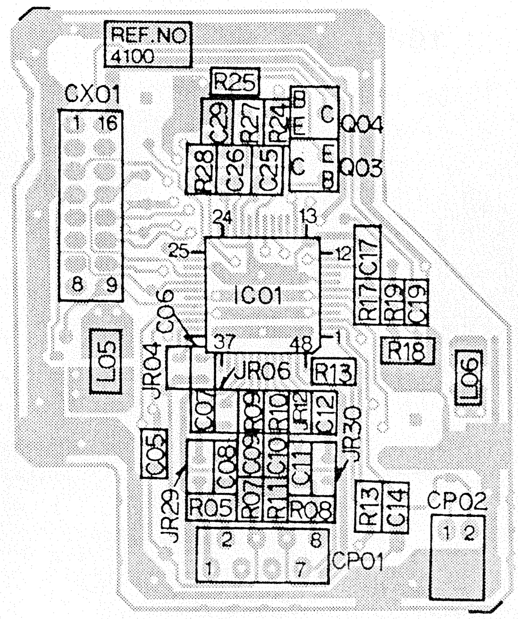
BOTTOM



C13
R16
R15
REF.NO 500
Q05
Q01
R06
R20
C27
T01
D05
Q02
CY05
R19
R18
C11
R11
R08
C06
R07
C05
R05
R12
D02
D04
R23
C23
C07
R10
C03
R04
C04
R02
C12
D01
R01
R22

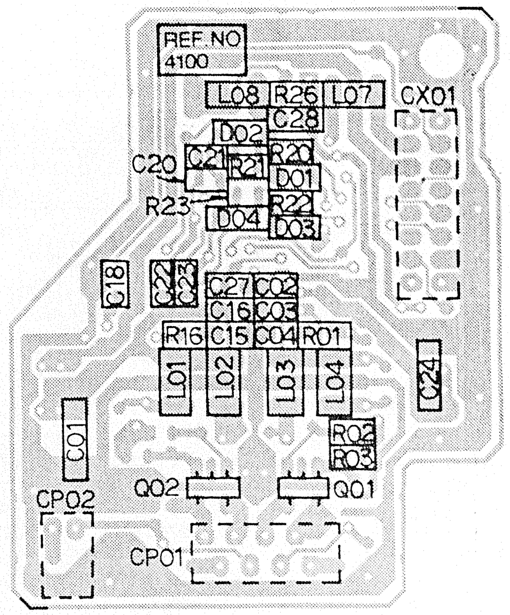
HEAD AMP

TOP



REF.NO 4100
CX01
R25
Q04
Q03
R28
C26
C25
C29
R27
R24
IC01
C17
R17
R19
C19
R18
C06
JR04
L05
JR06
R13
L06
C07
C12
JR30
C05
JR29
R05
R08
R13
C14
CP02
CP01

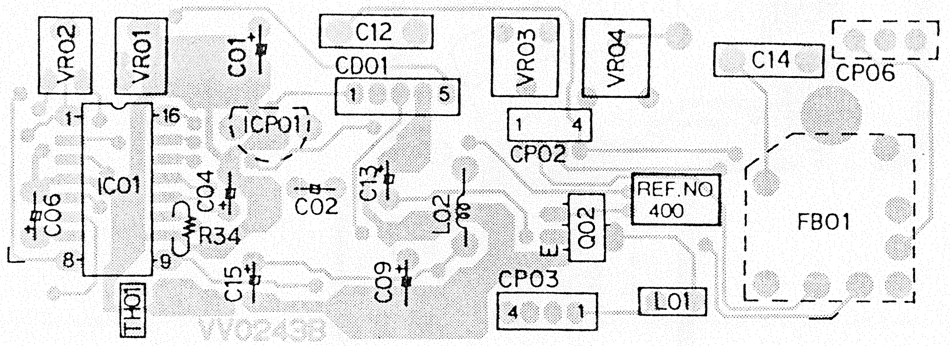
BOTTOM



REF.NO 4100
L08
R26
L07
CX01
C28
D02
C20
C21
R21
R20
D01
R23
D04
R22
D03
C18
C22
C23
C27
C02
C16
C03
R16
C15
C04
R01
L01
L02
L03
L04
C24
C01
R02
R03
CP02
Q02
Q01
CP01

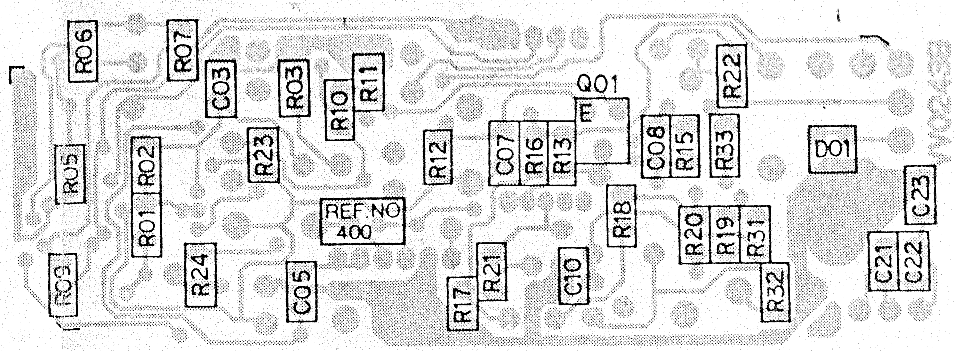
VIEWFINDER

TOP



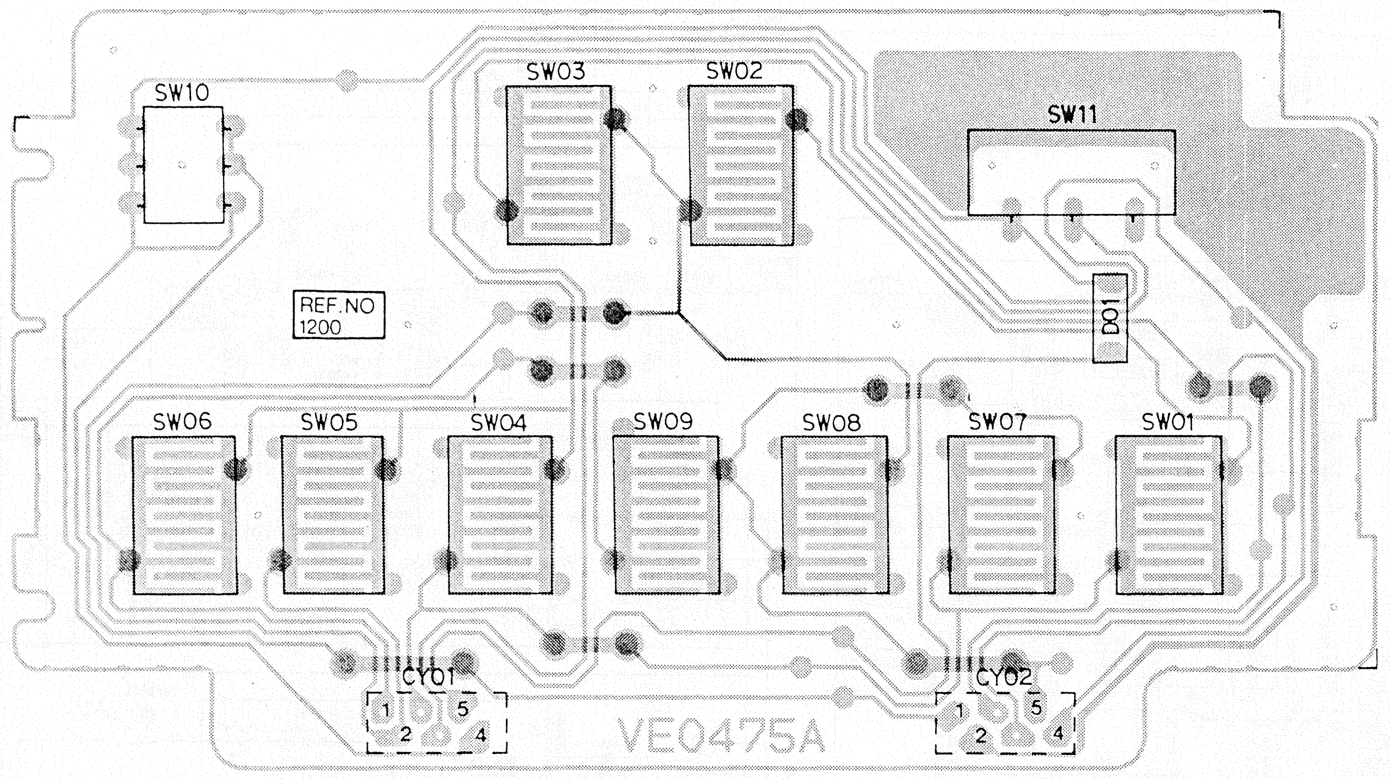
VR02
VR01
C01
C12
CD01
VR03
VR04
C14
CP06
ICP01
IC01
C06
C04
R34
C02
C13
L02
CP02
Q02
REF.NO 400
FB01
C15
C09
CP03
L01
TH01
VV0243B

BOTTOM

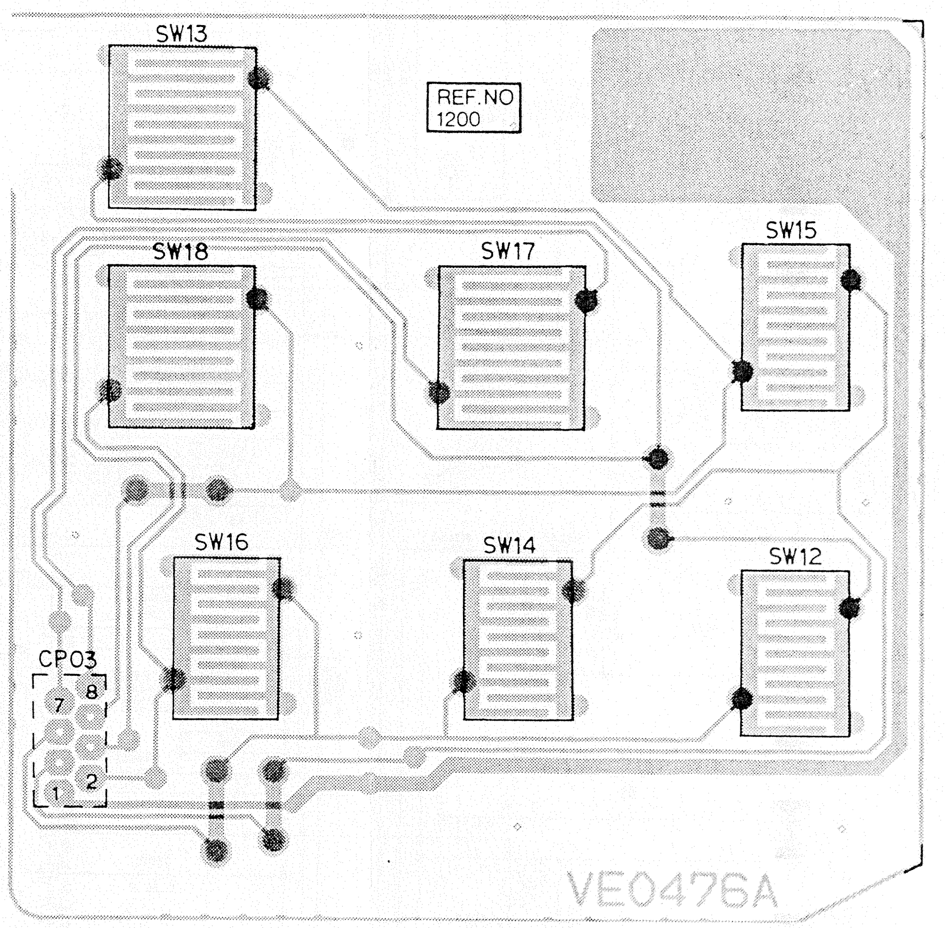


R06
R07
C03
R03
R10
R11
Q01
R22
R05
R02
R01
R23
R12
C07
R16
R13
C08
R15
R33
D01
C23
REF.NO 400
R18
R20
R19
R31
R03
R24
C05
R17
R21
C10
R32
C21
C22
VV0243B

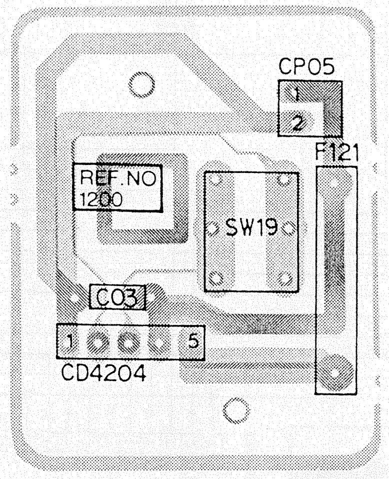
BACK OPERATION


SW10
SW03
SW02
SW11
REF.NO
1200
D01
SW06
SW05
SW04
SW09
SW08
SW07
SW01
CY01
1
5
2
4
CY02
1
5
2
4
VE0475A

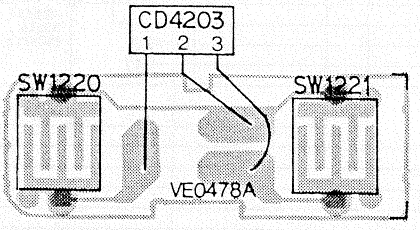
SIDE OPERATION


SW13
REF.NO
1200
SW18
SW17
SW15
SW16
SW14
SW12
CP03
7
8
1
2
VE0476A

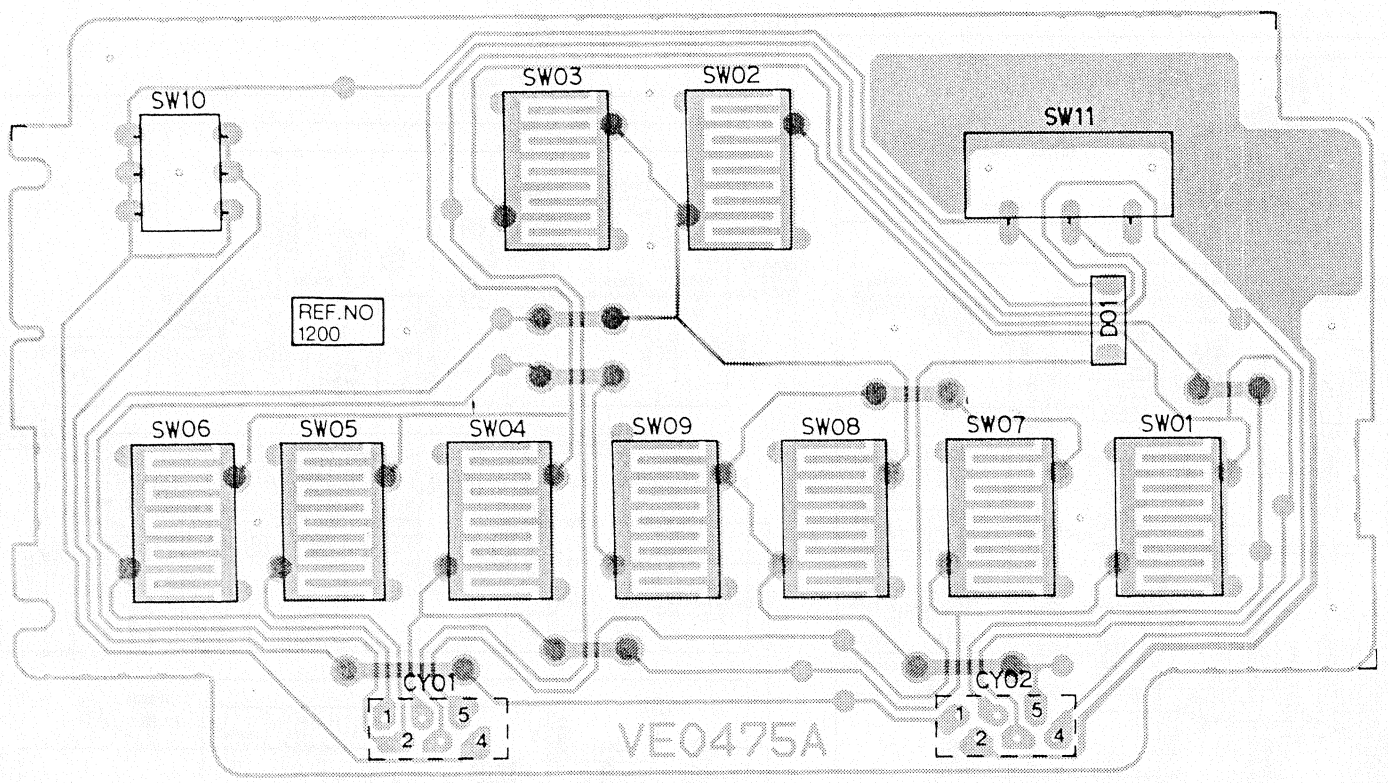
REC SW


CP05
1
2
F121
REF.NO
1200
SW19
C03
1
5
CD4204

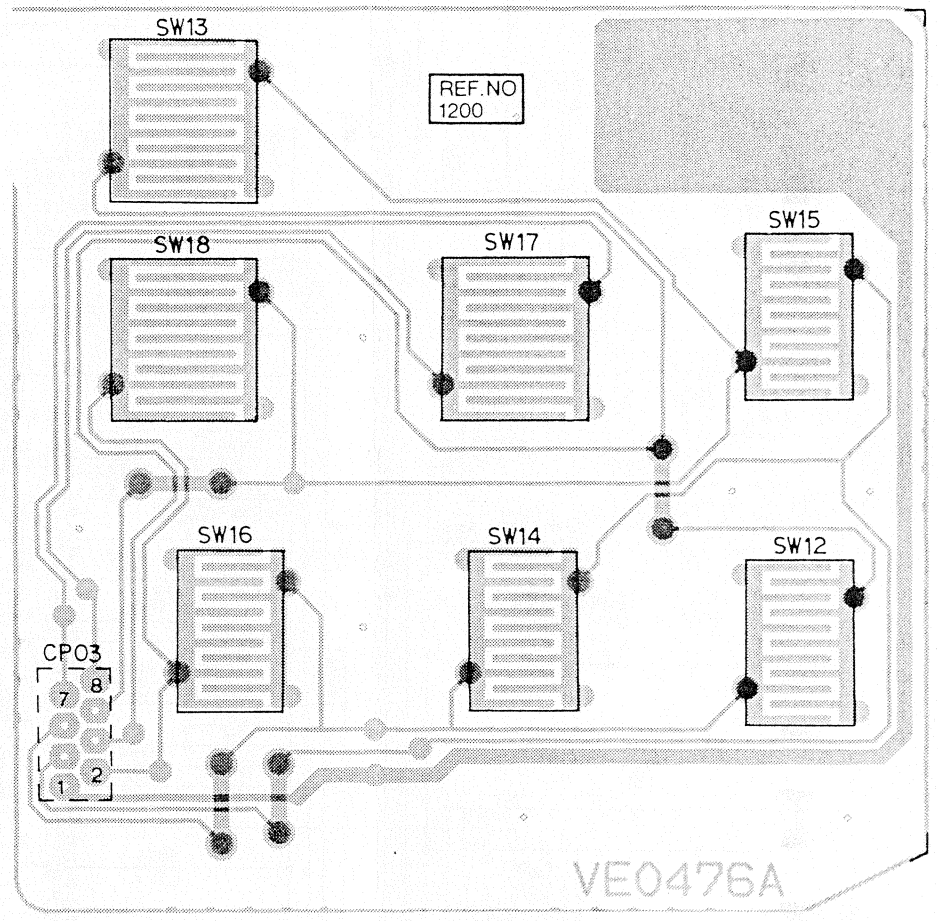
ZOOM SW


CD4203
1 2 3
SW1220
SW1221
VE0478A

BACK OPERATION


SW10
SW03
SW02
SW11
REF.NO 1200
D01
SW06
SW05
SW04
SW09
SW08
SW07
SW01
CY01
1 5 2 4
VE0475A
CY02
1 5 2 4

SIDE OPERATION


SW13
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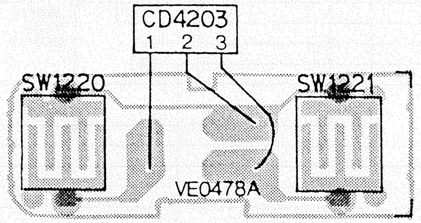
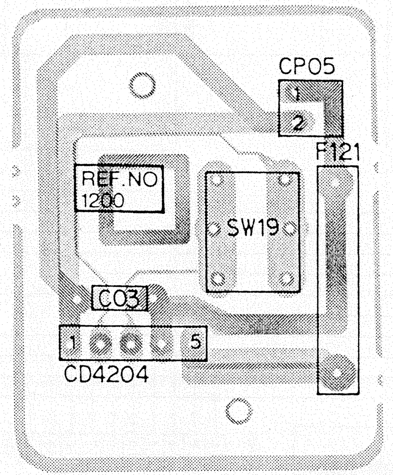
SW18
SW17
SW15
SW16
SW14
SW12
CP03
7 8 1 2
VE0476A

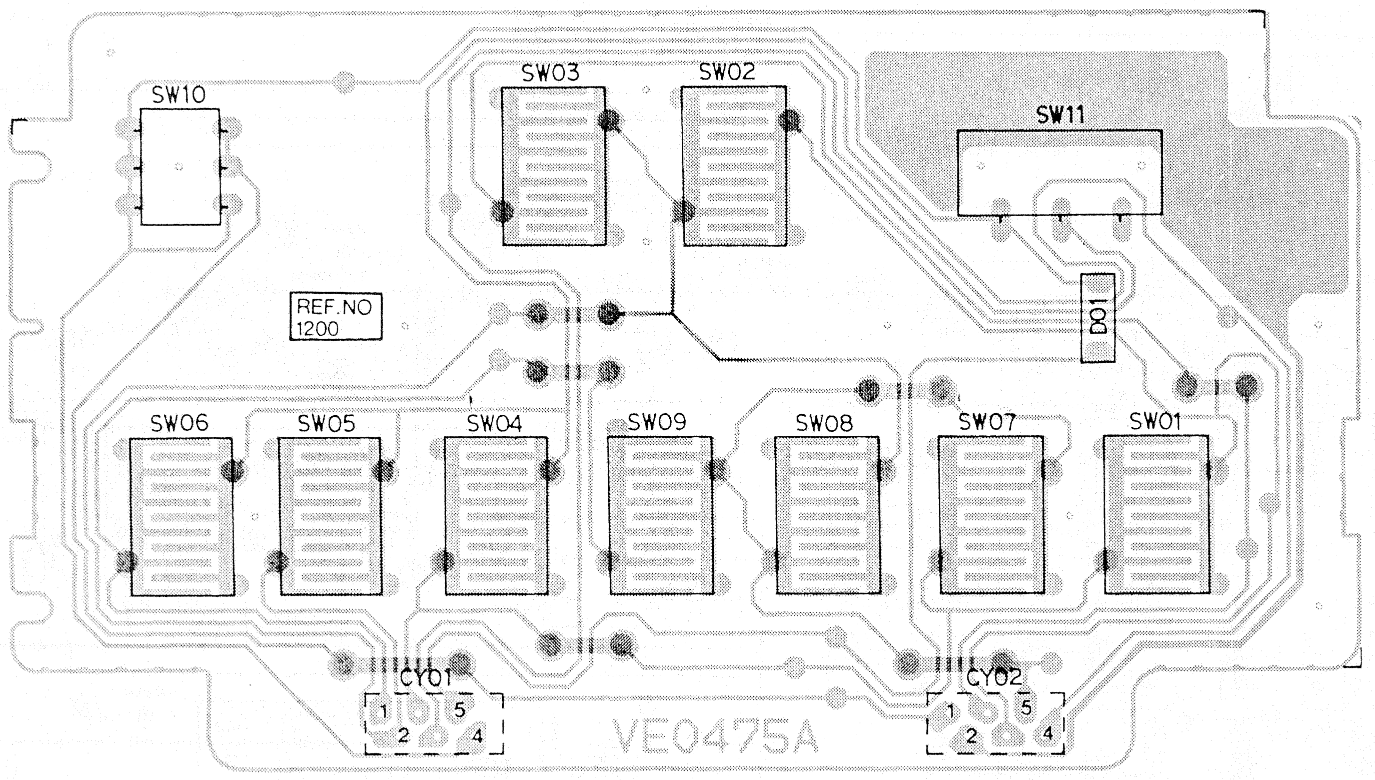
ZOOM SW


CD4203
1 2 3
SW1220
SW1221
VE0478A

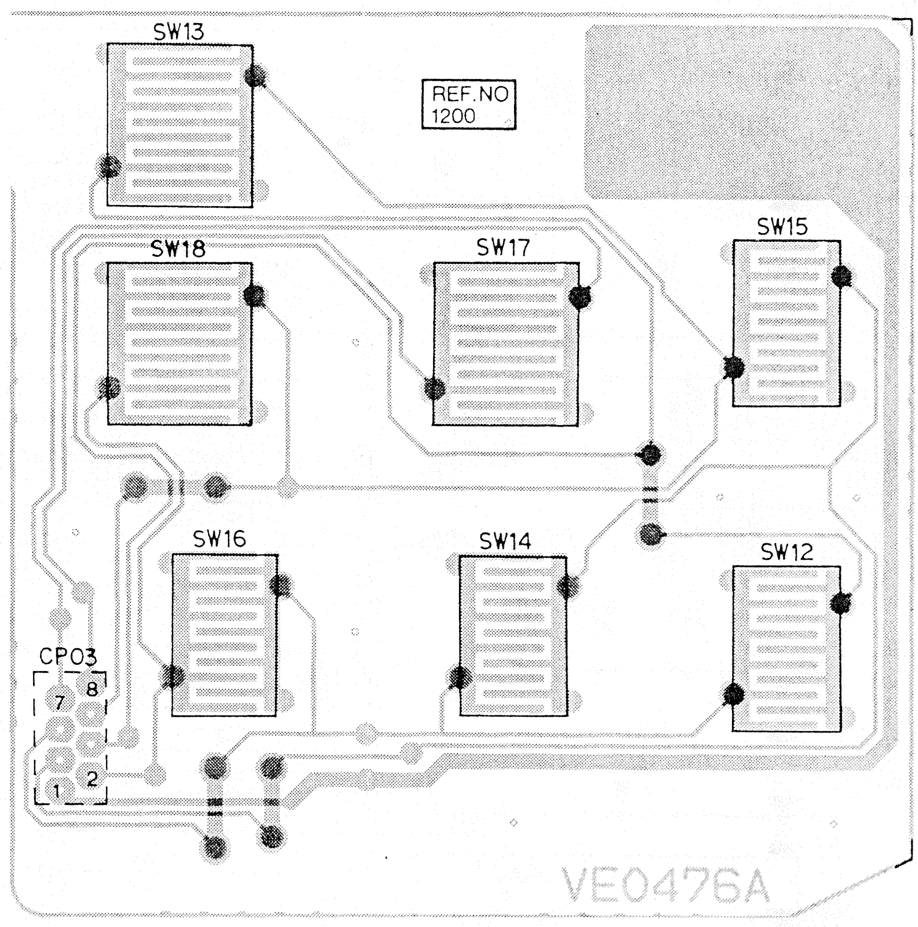
REC SW


CP05
1 2
F121
REF.NO 1200
SW19
C03
1 5
CD4204

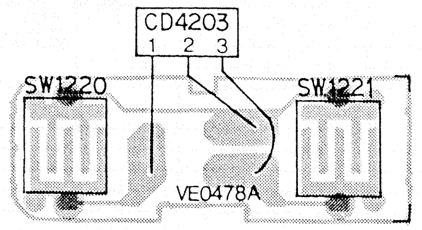
BACK OPERATION


SW10
SW03
SW02
SW11
REF.NO
1200
D01
SW06
SW05
SW04
SW09
SW08
SW07
SW01
CY01
1
5
2
4
CY02
1
5
2
4
VE0475A

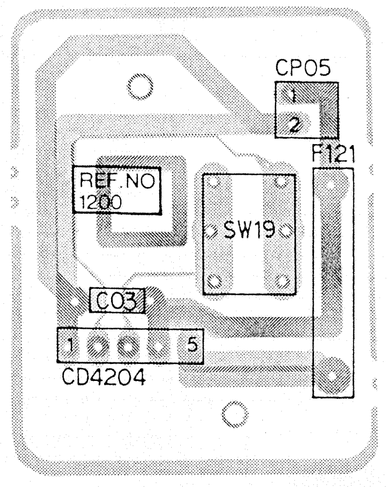
SIDE OPERATION


SW13
REF.NO
1200
SW18
SW17
SW15
SW16
SW14
SW12
CP03
7
8
2
1
VE0476A

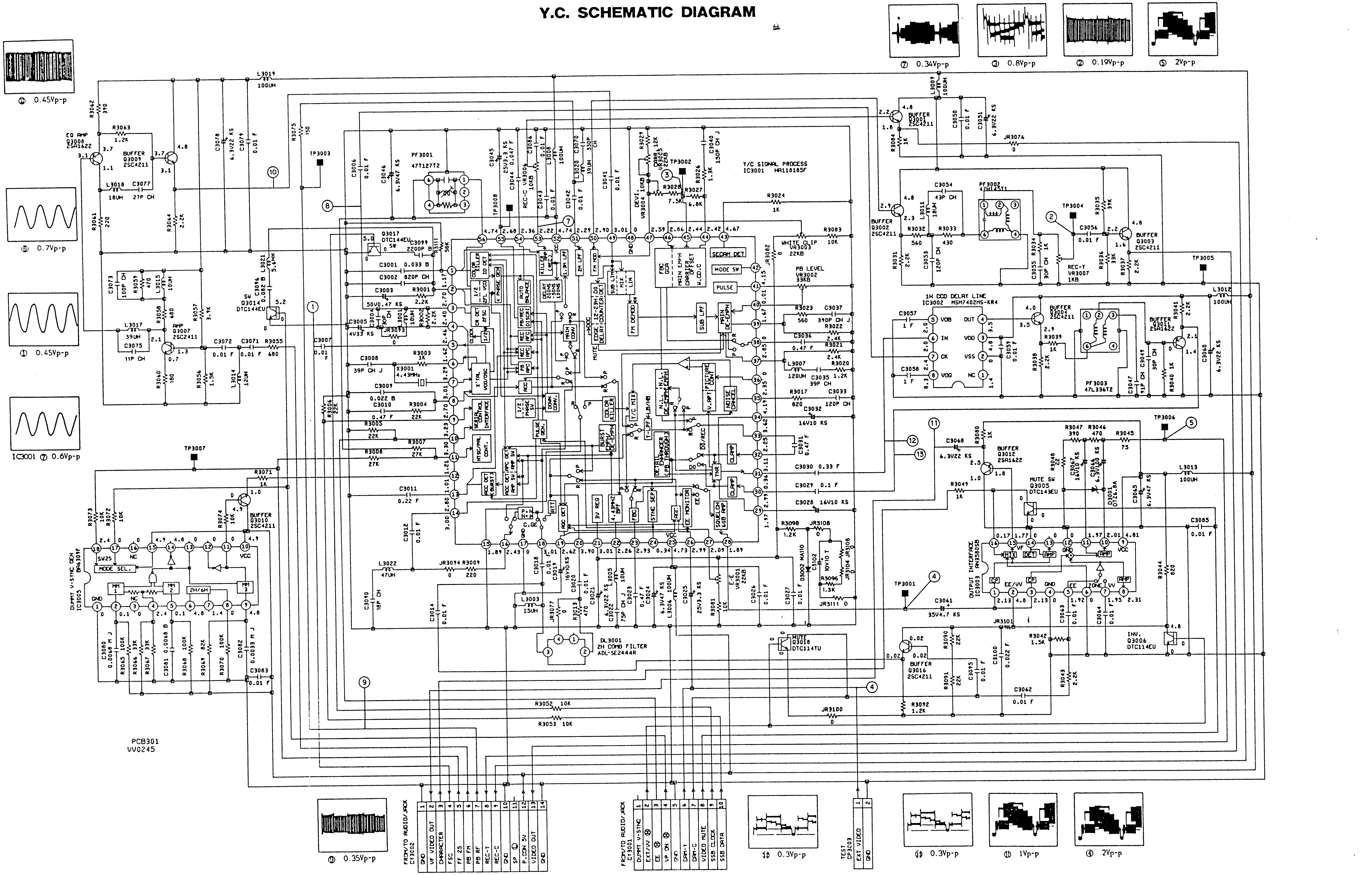
ZOOM SW


CD4203
1
2
3
SW1220
SW1221
VE0478A

REC SW


CP05
1
2
F121
REF.NO
1200
SW19
C03
1
5
CD4204

Y.C. SCHEMATIC DIAGRAM

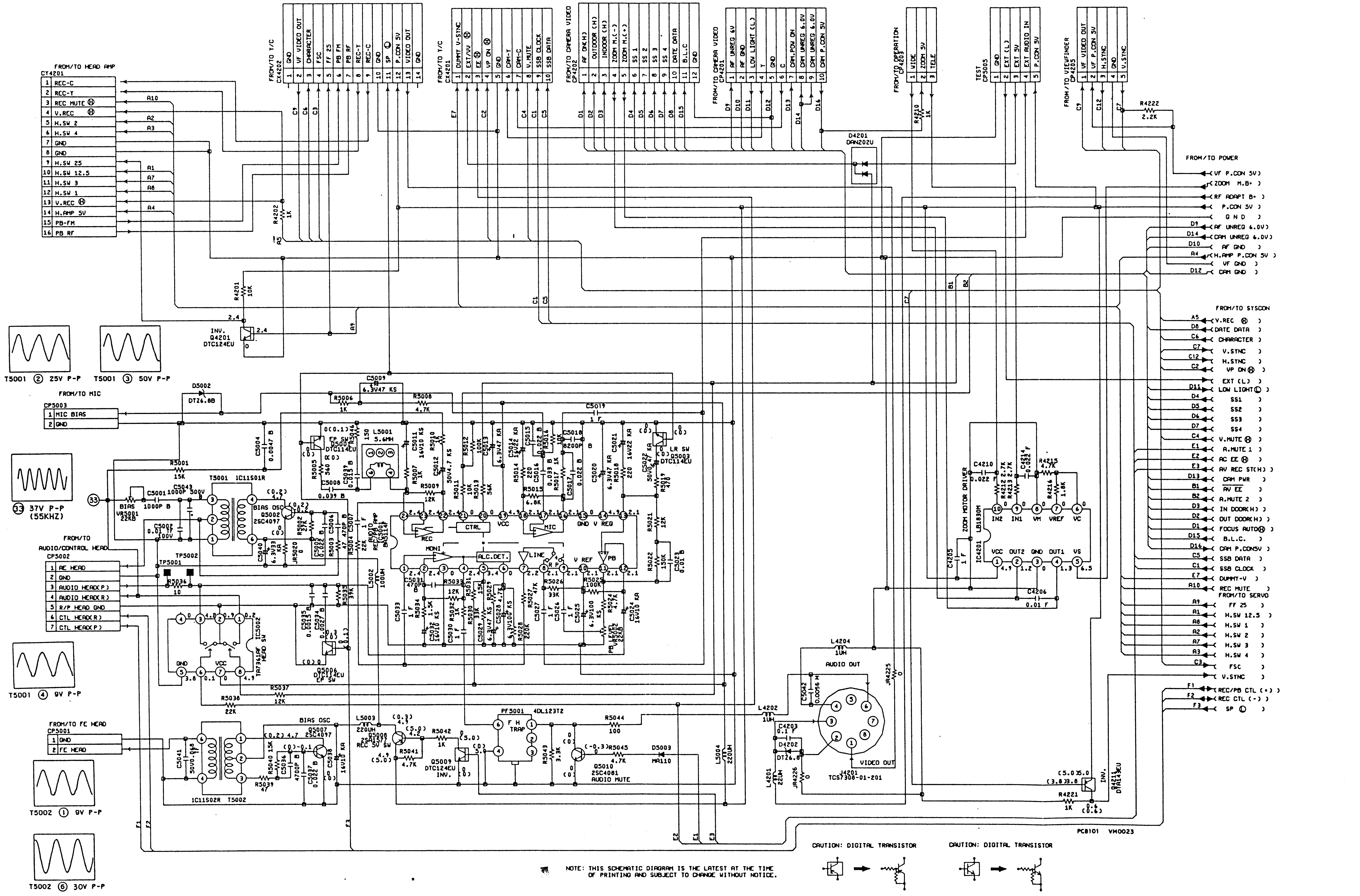


⑭ 0.45Vp-p
⑦ 0.34Vp-p
③ 0.8Vp-p
② 0.19Vp-p
⑤ 2Vp-p
⑮ 0.7Vp-p
① 0.45Vp-p
IC3001 ⑦ 0.6Vp-p
⑨ 0.35Vp-p
⑫ 0.3Vp-p
⑬ 0.3Vp-p
⑪ 1Vp-p
④ 2Vp-p
EQ AMP Q3008 2SA1622
BUFFER Q3009 2SC4211
AMP Q3007 2SC2411
Y/C SIGNAL PROCESS IC3001 HA118185F
BUFFER Q3001 2SC4211
BUFFER Q3002 2SC4211
BUFFER Q3003 2SC4211
1H CCD DELAY LINE IC3002 MSM7402MS-KR4
BUFFER Q3004 2SC4211
BUFFER Q3011 2SA1622
BUFFER Q3012 2SA1622
MUTE SW Q3005 DTC143EU
OUTPUT INTERFACE IC3003 AN3580SB
INV. Q3006 DTC114EU
BUFFER Q3016 2SC4211
MUTE Q3018 DTC114TU
BUFFER Q3010 2SC4211
DUMMY V-SYNC GEN IC3005 BH6309F
SW Q3014 DTC144EU
Q3017 DTC144EU
DL3001 2H COMB FILTER ADL-SE2444R
PF3001 47T127T2
PF3002 47H125T1
PF3003 47L336T2
X3001 4.43MHz
WHITE CLIP VR3003 22KB
PB LEVEL VR3002 33KB
DEVI. VR3004 10KB
REC-Y VR3007 1KB
REC-C VR3006 10KB
E-E VR3001 22KB
CARR. VR3005 22KB
MODE SEL.
PCB301 VV0245
TP3001
TP3002
TP3003
TP3004
TP3005
TP3006
TP3007
TP3008
FROM/TO AUDIO/JACK CT3002
GND
VF VIDEO OUT
CHARACTER
FSC
FF 25
PB FM
PB RF
REC-T
REC-C
GND
SP
P.CON 5V
VIDEO OUT
GND
FROM/TO AUDIO/JACK CT3001
DUMMY V-SYNC
EXT/VV
EE
VP ON
SW
CAM-T
CAM-C
VIDEO MUTE
SSB CLOCK
SSB DATA
TEST CP3003
EXT VIDEO
GND

Y.C. SCHEMATIC DIAGRAM

1-12042

AUDIO/JACK SCHEMATIC DIAGRAM

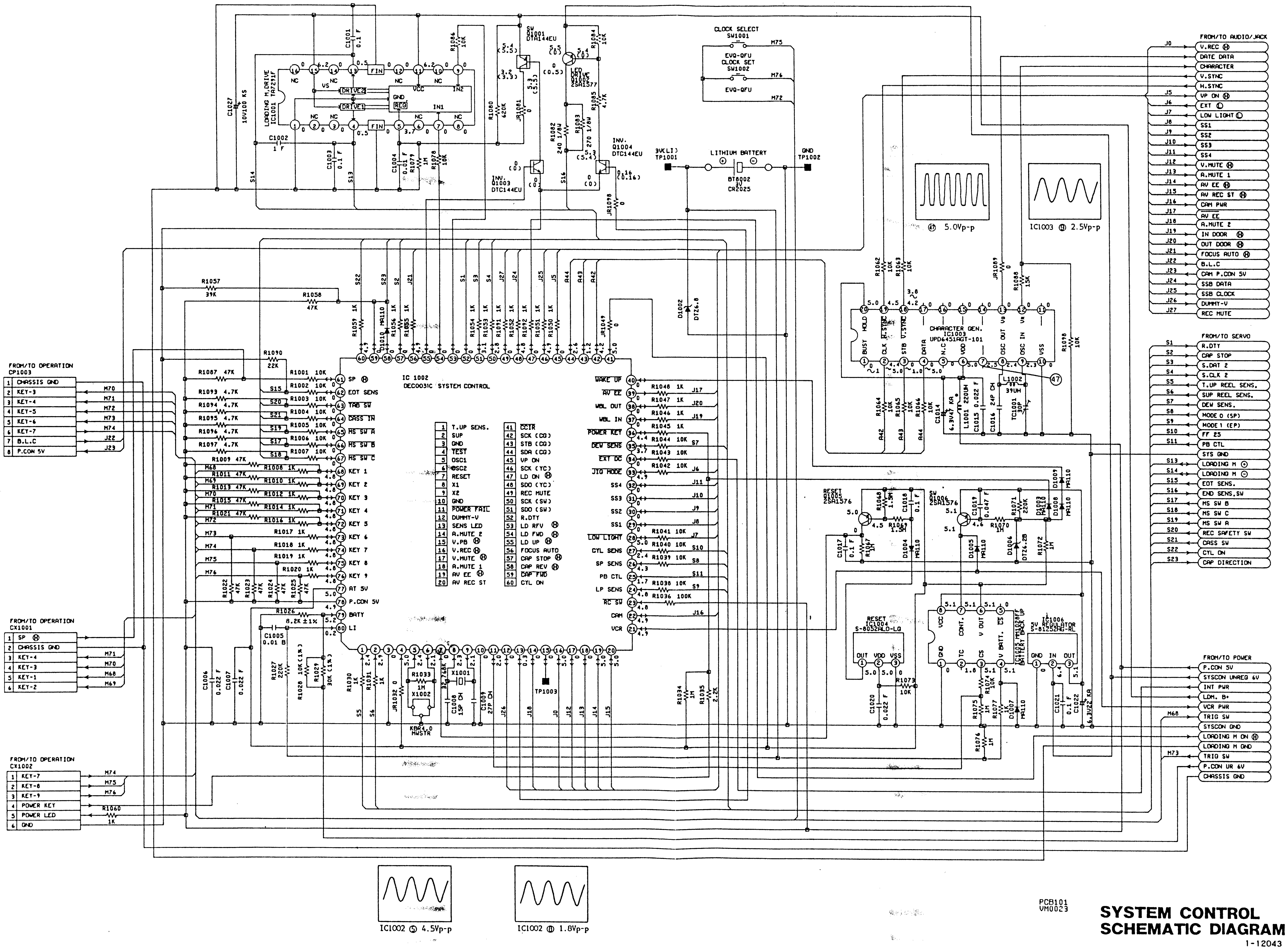


FROM/TO HEAD AMP CY4201
1 REC-C
2 REC-Y
3 REC MUTE ⊕
4 V.REC ⊕
5 H.SW 2
6 H.SW 4
7 GND
8 GND
9 H.SW 25
10 H.SW 12.5
11 H.SW 3
12 H.SW 1
13 V.REC ⊕
14 H.AMP 5V
15 PB-FM
16 PB RF
FROM/TO Y/C CX4202
1 GND
2 VF VIDEO OUT
3 CHARACTER
4 FSC
5 FF 25
6 PB FM
7 PB RF
8 REC-Y
9 REC-C
10 GND
11 SP ⓛ
12 P.CON 5V
13 VIDEO OUT
14 GND
FROM/TO Y/C CX4201
1 DUMMY V-SYNC
2 EXT/VU ⊕
3 EE ⊕
4 VP ON ⊕
5 GND
6 CAM-Y
7 CAM-C
8 V.MUTE
9 SSB CLOCK
10 SSB DATA
FROM/TO CAMERA VIDEO CP4202
1 AF ON(H)
2 OUTDOOR (H)
3 INDOOR (H)
4 ZOOM M.(-)
5 ZOOM M.(+)
6 SS 1
7 SS 2
8 SS 3
9 SS 4
10 DATE DATA
11 B.L.C
12 GND
FROM/TO CAMERA VIDEO CP4201
1 AF UNREG 6V
2 AF GND
3 LOW LIGHT (L)
4 Y
5 GND
6 C
7 CAM.POW ON
8 CAM UNREG 6.0V
9 CAM UNREG 6.0V
10 CAM P.CON 5V
FROM/TO OPERATION CP4203
1 WIDE
2 ZOOM 5V
3 TELE
TEST CP5005
1 GND
2 EXT (L)
3 EXT 5V
4 EXT AUDIO IN
5 P.CON 5V
FROM/TO VIEWFINDER CP4205
1 VF VIDEO OUT
2 VF P.CON 5V
3 H.SYNC
4 GND
5 V.SYNC
FROM/TO POWER
VF P.CON 5V
ZOOM M.B+
RF ADAPT B+
P.CON 5V
GND
AF UNREG 6.0V
CAM UNREG 6.0V
AF GND
H.AMP P.CON 5V
VF GND
CAM GND
FROM/TO SYSCON
V.REC ⊕
DATE DATA
CHARACTER
V.SYNC
H.SYNC
VP ON ⊕
EXT (L)
LOW LIGHT (L)
SS1
SS2
SS3
SS4
V.MUTE ⊕
A.MUTE 1
AC EE ⊕
AV REC ST(H)
CAM PWR
AV EE
A.MUTE 2
IN DOOR(H)
OUT DOOR(H)
FOCUS AUTO ⊕
B.L.C.
CAM P.CON5V
SSB DATA
SSB CLOCK
DUMMY-V
REC MUTE
FROM/TO SERVO
FF 25
H.SW 12.5
H.SW 1
H.SW 2
H.SW 3
H.SW 4
FSC
V.SYNC
REC/PB CTL (+)
REC CTL (-)
SP ⓛ
FROM/TO MIC CP5003
1 MIC BIAS
2 GND
FROM/TO AUDIO/CONTROL HEAD CP5002
1 AE HEAD
2 GND
3 AUDIO HEAD(P)
4 AUDIO HEAD(R)
5 R/P HEAD GND
6 CTL HEAD(R)
7 CTL HEAD(P)
FROM/TO FE HEAD CP5001
1 GND
2 FE HEAD
T5001 ② 25V P-P
T5001 ③ 50V P-P
㉝ 37V P-P (55KHZ)
T5001 ④ 9V P-P
T5002 ① 9V P-P
T5002 ⑥ 30V P-P
INV. Q4201 DTC124EU
D5002 DTZ6.8B
D4201 DAN202U
T5001 1C11S01R
BIAS OSC Q5002 2SC4097
IC5001 AUDIO REC/PB AMP BA5114F
CTRL
VCC
MIC
REC
MONI
ALC.DET.
LINE
V REF
PB
GND
V REG
LR SW Q5003 DTC114EU
FP SW Q5004 DTC114EU
L5001 5.6MH
IC5002 TA7361AF HEAD SW
CF SW Q5006 DTC114EU
BIAS VR5001 22KB
IC4201 LB1830M ZOOM MOTOR DRIVER
IN2 IN1 VM VREF VC
VCC OUT2 GND OUT1 VS
T5002 1C11S02R
BIAS OSC Q5007 2SC4097
REC 5V SW Q5008 2SA1577
Q5009 DTC124EU INV.
PF5001 4DL123T2 F H TRAP
Q5010 2SC4081 AUDIO MUTE
D5003 MA110
L4204 1UH AUDIO OUT
L4202 1UH
D4202 DTZ6.8
J4201 TCS7308-01-201
VIDEO OUT
INV. Q4211 DTA143EU
PCB101 VM0023
CAUTION: DIGITAL TRANSISTOR
CAUTION: DIGITAL TRANSISTOR

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

AUDIO/JACK SCHEMATIC DIAGRAM

SYSTEM CONTROL SCHEMATIC DIAGRAM

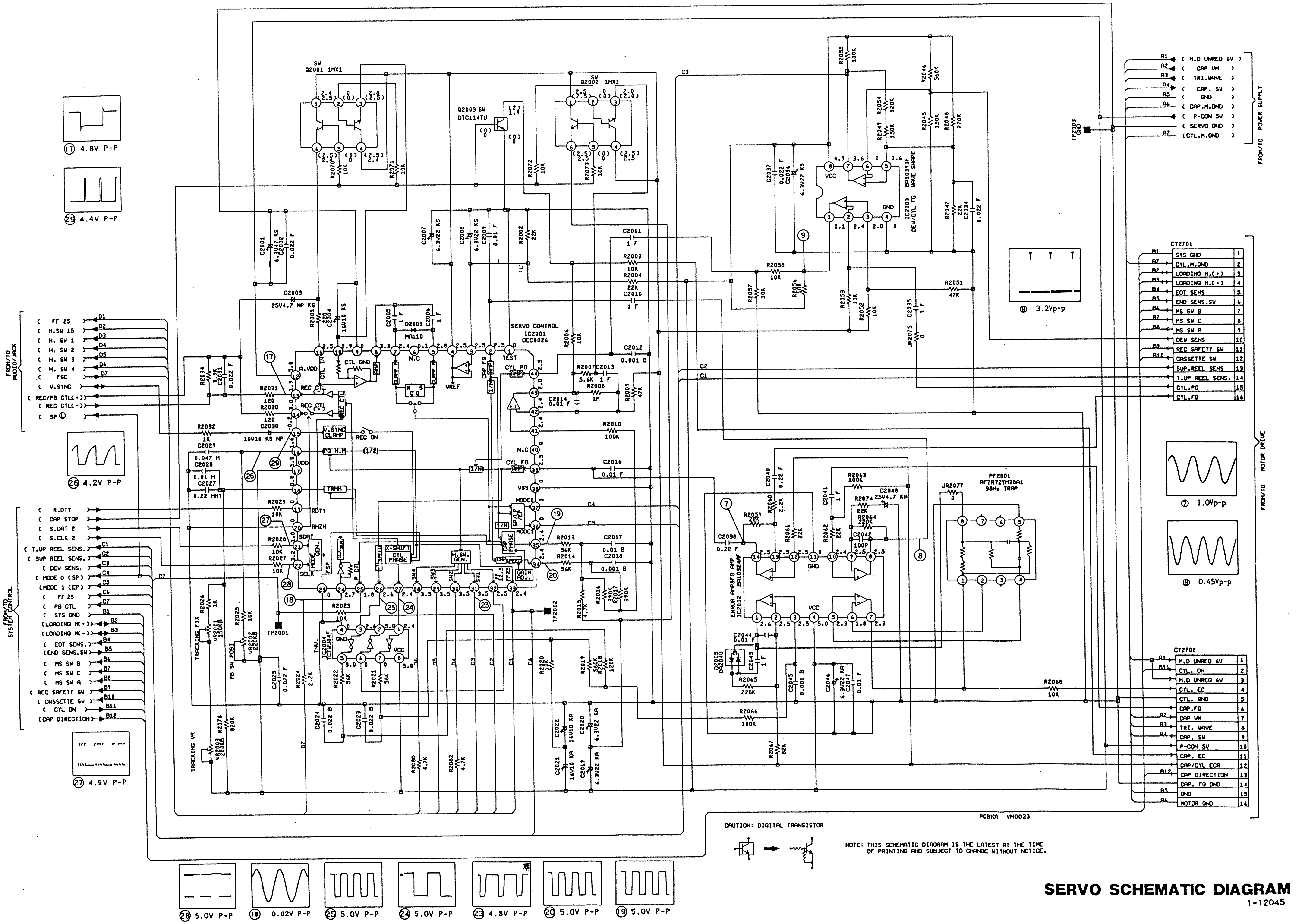

LOADING M.DRIVE IC1001 TA7291F
C1001 0.1 F
C1002 1 F
C1003 0.1 F
C1004 0.01 F
C1027 10V100 KS
R1086 10K
R1079 1M
R1078 10K
SW Q1001 DTA144EU
R1080 620K
JR1081 0
LED DRIVE Q1002 2SA1577
R1084 10K
R1085 4.7K
R1082 240 1/8W
R1083 270 1/8W
INV. Q1003 DTC144EU
INV. Q1004 DTC144EU
JR1098 0
CLOCK SELECT SW1001 EVQ-QFU
CLOCK SET SW1002 EVQ-QFU
M75
M76
M72
3V(LI) TP1001
LITHIUM BATTERY BT8002 3V CR2025
GND TP1002
D1002 DTZ6.8
⑪ 5.0Vp-p
IC1003 ⑨ 2.5Vp-p
CHARACTER GEN. IC1003 UPD6451AGT-101
BUSY HOLD CLK H.SYNC STB V.SYNC DATA N.C VDD OSC OUT Vo OSC IN VA VSS
R1062 10K
R1063 10K
JR1089 0
R1088 15K
R1098 10K
R1064 10K
R1065 10K
R1066 10K
C1014 6.3V47 KA
L1001 220UH
C1015 0.022 F
C1016 24P CH
TC1001 30P
L1002 39UH
R1057 39K
R1058 47K
R1090 22K
IC 1002 DEC0031C SYSTEM CONTROL
1 T.UP SENS.
2 SUP
3 GND
4 TEST
5 OSC1
6 OSC2
7 RESET
8 X1
9 X2
10 GND
11 POWER FAIL
12 DUMMY-V
13 SENS LED
14 A.MUTE 2
15 V.PB ⊕
16 V.REC ⊕
17 V.MUTE ⊕
18 A.MUTE 1
19 AV EE ⊕
20 AV REC ST
41 CCTR
42 SCK (CG)
43 STB (CG)
44 SDA (CG)
45 VP ON
46 SCK (YC)
47 LD ON ⊕
48 SDO (YC)
49 REC MUTE
50 SCK (SV)
51 SDO (SV)
52 R.DTY
53 LD RFV ⊕
54 LD FWD ⊕
55 LD UP ⊕
56 FOCUS AUTO
57 CAP STOP ⊕
58 CAP REV ⊕
59 CAP FWD
60 CYL ON
SP ⊕
EOT SENS
TAB SW
CASS IN
MS SW A
MS SW B
MS SW C
KEY 1
KEY 2
KEY 3
KEY 4
KEY 5
KEY 6
KEY 7
KEY 8
KEY 9
AT 5V
P.CON 5V
BATY
LI
WAKE UP
AV EE
WBL OUT
WBL IN
POWER KEY
DEW SENS
EXT DC
JIG MODE
SS4
SS3
SS2
SS1
LOW LIGHT
CYL SENS
SP SENS
PB CTL
LP SENS
RC SW
CAM
VCR
FROM/TO OPERATION CP1003
1 CHASSIS GND
2 KEY-3
3 KEY-4
4 KEY-5
5 KEY-6
6 KEY-7
7 B.L.C
8 P.CON 5V
FROM/TO OPERATION CX1001
1 SP ⊕
2 CHASSIS GND
3 KEY-4
4 KEY-3
5 KEY-1
6 KEY-2
FROM/TO OPERATION CX1002
1 KEY-7
2 KEY-8
3 KEY-9
4 POWER KEY
5 POWER LED
6 GND
R1060 1K
C1005 0.01 B
C1006 0.022 F
C1007 0.022 F
R1026 8.2K ±1%
R1027 220K
R1028 10K (1%)
R1029 30K (1%)
R1030 1K
R1031 1K
JR1032 0
R1033 1M
X1001 32.768K
X1002 KBR4.0 MWSTR
C1008 15P CH
C1009 27P CH
TP1003
R1034 1M
R1035 2.2K
RESET Q1005 2SA1576
R1068 1.5M
C1018 10K
R1069 1.5M
C1017 0.1 F
R1067 1M
D1004 MA110
SW Q1006 2SA1576
C1019 0.047 F
R1071 220K
R1070 1M
D1003 MA110
D1009 MA110
D1008 MA110
D1005 MA110
D1006 DTZ6.2B
R1072 1M
RESET IC1004 S-8052ALO-LG
OUT VDD VSS
C1020 0.022 F
R1073 10K
IC1005 MM1028F BATTERY BACKUP
VCC CONT. V OUT CS GND TC V BATT.
R1074 10K
R1075 1M
R1077 1M
R1076 1M
D1007 MA110
5V IC1006 REGULATOR S-81250HG-RL
GND IN OUT
C1021 0.1 F
C1022 6.3V22 KA
FROM/TO AUDIO/JACK
J0 V.REC ⊕
DATE DATA
CHARACTER
V.SYNC
H.SYNC
J5 VP ON ⊕
J6 EXT ⊖
J7 LOW LIGHT ⊖
J8 SS1
J9 SS2
J10 SS3
J11 SS4
J12 V.MUTE ⊕
J13 A.MUTE 1
J14 AV EE ⊕
J15 AV REC ST ⊕
J16 CAM PWR
J17 AV EE
J18 A.MUTE 2
J19 IN DOOR ⊕
J20 OUT DOOR ⊕
J21 FOCUS AUTO ⊕
J22 B.L.C
J23 CAM P.CON 5V
J24 SSB DATA
J25 SSB CLOCK
J26 DUMMY-V
J27 REC MUTE
FROM/TO SERVO
S1 R.DTY
S2 CAP STOP
S3 S.DAT 2
S4 S.CLK 2
S5 T.UP REEL SENS.
S6 SUP REEL SENS.
S7 DEW SENS.
S8 MODE 0 (SP)
S9 MODE 1 (EP)
S10 FF 25
S11 PB CTL
SYS GND
S13 LOADING M ⊕
S14 LOADING M ⊖
S15 EOT SENS.
S16 END SENS.SW
S17 MS SW B
S18 MS SW C
S19 MS SW A
S20 REC SAFETY SW
S21 CASS SW
S22 CYL ON
S23 CAP DIRECTION
FROM/TO POWER
P.CON 5V
SYSCON UNREG 6V
INT PWR
LDM. B+
VCR PWR
TRIG SW
SYSCON GND
LOADING M ON ⊕
LOADING M GND
TRIG SW
P.CON UR 6V
CHASSIS GND
IC1002 ⑤ 4.5Vp-p
IC1002 ⑪ 1.8Vp-p

PCB101
VM0023

SYSTEM CONTROL SCHEMATIC DIAGRAM

1-12043

SERVO SCHEMATIC DIAGRAM


SW Q2001 1MX1
Q2003 SW DTC114TU
SW Q2002 1MX1
SERVO CONTROL IC2001 DEC8026
IC2003 BA10393F DEW/CTL FG WAVE SHAPE
ERROR AMP&FG AMP BA10324AF IC2002
IC2004 TC7W04F INV.
PF2001 AFZR7ZTM38A1 38Hz TRAP
D2001 MA110
D2005 DA204U
TRACKING FIX VR2001 150KB
PB SW POS1 VR2002 220KB
TRACKING VR VR2003 200KB
TP2001
TP2002
TP2003 GND
V.SYNC CLAMP
PG M.M.
TRMM
1/72
1/N
CTL PHASE
X-SHIFT
H.SW. GEN.
GAIN ADJ.
CAP FG AMP
CYL PG AMP
CYL FG AMP
REC CTL
REC ON
VREF
N.C
TEST
VSS
VDD
A.VDD
MODE GEN.
SCLK
SDAT
RHZN
RDTY
FSP
P CTL
FROM/TO AUDIO/JACK
(FF 25
(H.SW 15
(H. SW 1
(H. SW 2
(H. SW 3
(H. SW 4
(FSC
(V.SYNC
(REC/PB CTL(+)
(REC CTL(-)
(SP
FROM/TO SYSTEM CONTROL
(R.DTY
(CAP STOP
(S.DAT 2
(S.CLK 2
(T.UP REEL SENS.
(SUP REEL SENS.
(DEW SENS.
(MODE 0 (SP)
(MODE 1 (EP)
(FF 25
(PB CTL
(SYS GND
(LOADING MK(+))
(LOADING MK(-))
(EOT SENS.
(END SENS.SW)
(MS SW B
(MS SW C
(MS SW A
(REC SAFETY SW
(CASSETTE SW
(CYL ON
(CAP DIRECTION)
A1 (M.D UNREG 6V)
A2 (CAP VM)
A3 (TRI.WAVE)
A4 (CAP. SW)
A5 (GND)
A6 (CAP.M.GND)
(P-CON 5V)
(SERVO GND)
A7 (CTL.M.GND)
FROM/TO POWER SUPPLY
CY2701
1 STS GND
2 CTL.M.GND
3 LOADING M.(+)
4 LOADING M.(-)
5 EOT SENS
6 END SENS.SW
7 MS SW B
8 MS SW C
9 MS SW A
10 DEW SENS
11 REC SAFETY SW
12 CASSETTE SW
13 SUP.REEL SENS
14 T.UP REEL SENS.
15 CTL.PG
16 CTL.FG
FROM/TO MOTOR DRIVE
CY2702
1 M.D UNREG 6V
2 CTL. ON
3 M.D UNREG 6V
4 CTL. EC
5 CTL. GND
6 CAP.FG
7 CAP VM
8 TRI. WAVE
9 CAP. SW
10 P-CON 5V
11 CAP. EC
12 CAP/CYL ECR
13 CAP DIRECTION
14 CAP. FG GND
15 GND
16 MOTOR GND
PCB101 VM0023
⑰ 4.8V P-P
㉙ 4.4V P-P
㉖ 4.2V P-P
㉗ 4.9V P-P
⑨ 3.2Vp-p
⑦ 1.0Vp-p
⑧ 0.45Vp-p
㉘ 5.0V P-P
⑱ 0.62V P-P
㉕ 5.0V P-P
㉔ 5.0V P-P
㉓ 4.8V P-P
⑳ 5.0V P-P
⑲ 5.0V P-P

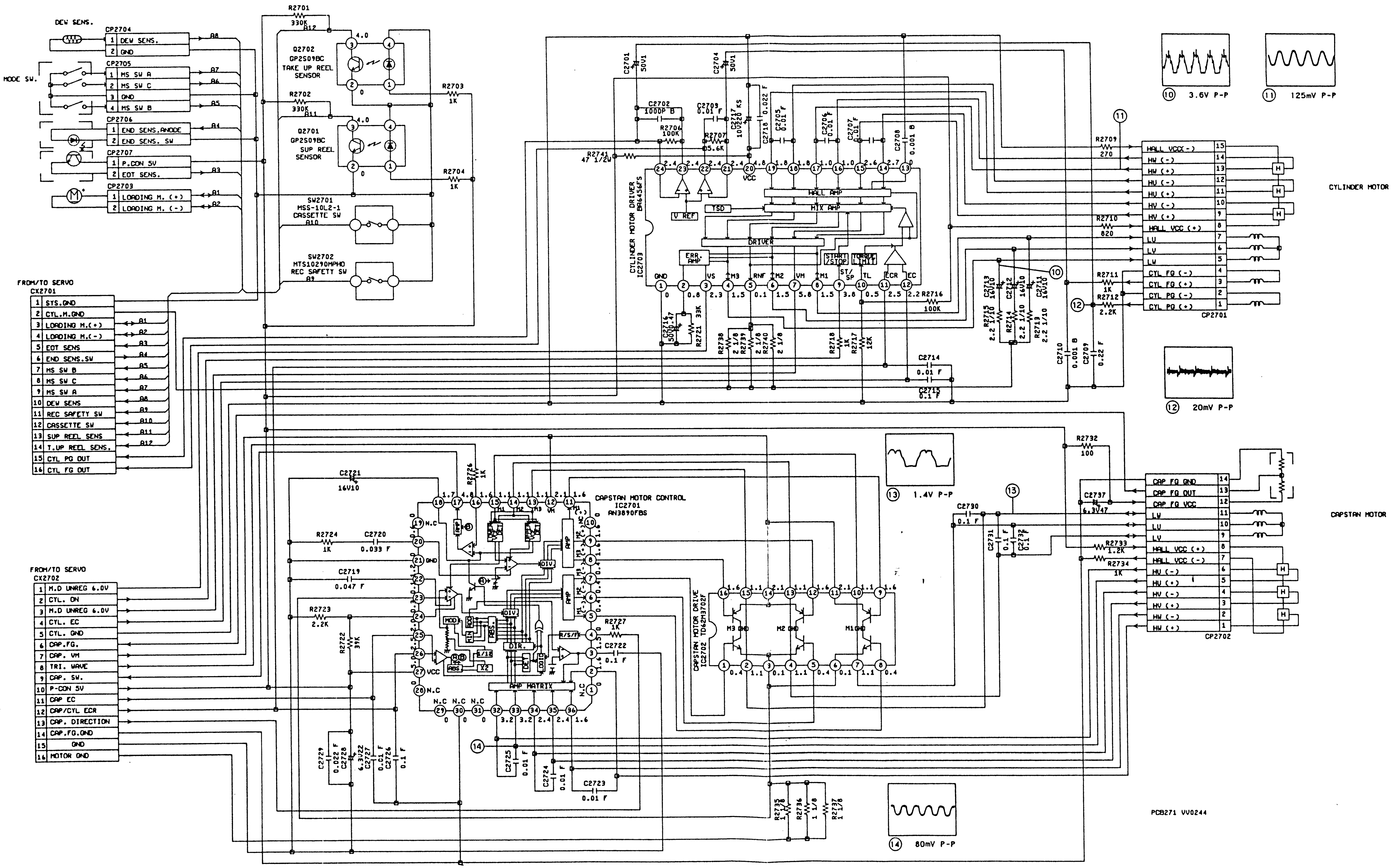
CAUTION: DIGITAL TRANSISTOR

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

SERVO SCHEMATIC DIAGRAM

1-12045

MOTOR DRIVE SCHEMATIC DIAGRAM

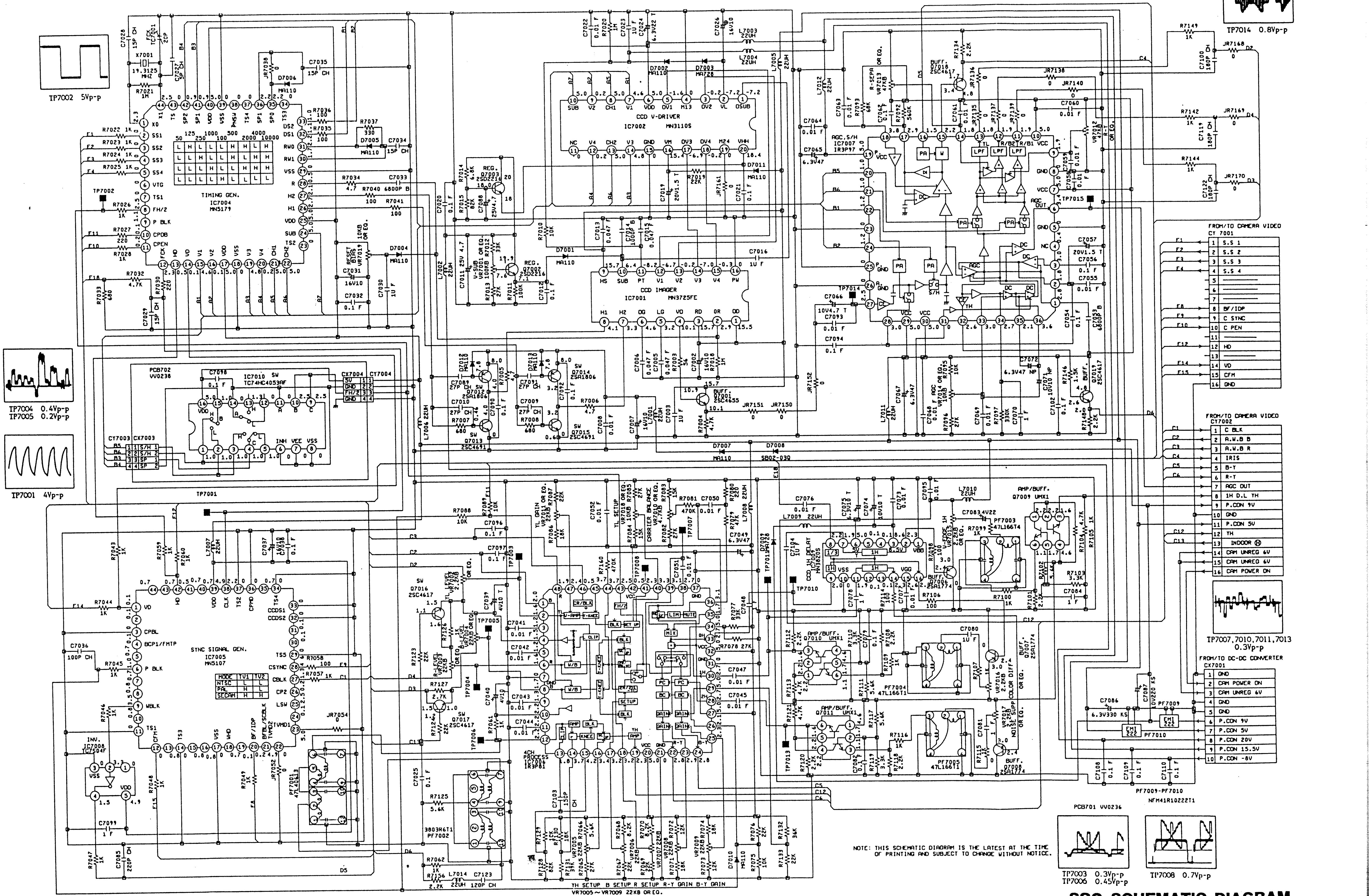

DEW SENS.
CP2704
1 DEW SENS.
2 GND
MODE SW.
CP2705
1 MS SW A
2 MS SW C
3 GND
4 MS SW B
CP2706
1 END SENS.ANODE
2 END SENS. SW
CP2707
1 P.CON 5V
2 EOT SENS.
CP2703
1 LOADING M. (+)
2 LOADING M. (-)
R2701 330K
R2702 330K
Q2702 GP2S09BC TAKE UP REEL SENSOR
Q2701 GP2S09BC SUP REEL SENSOR
R2703 1K
R2704 1K
SW2701 MSS-10L2-1 CASSETTE SW
SW2702 MTS10290MPHO REC SAFETY SW
FROM/TO SERVO
CX2701
1 SYS.GND
2 CYL.M.GND
3 LOADING M.(+)
4 LOADING M.(-)
5 EOT SENS
6 END SENS.SW
7 MS SW B
8 MS SW C
9 MS SW A
10 DEW SENS
11 REC SAFETY SW
12 CASSETTE SW
13 SUP REEL SENS
14 T.UP REEL SENS.
15 CYL PG OUT
16 CYL FG OUT
CYLINDER MOTOR DRIVER BA6456FS IC2703
HALL AMP
MIX AMP
DRIVER
V REF
TSD
ERR. AMP
START/STOP
TORQUE LIMIT
GND VS M3 RNF M2 VM M1 ST/SP TL ECR EC VCC
R2741 47 1/2W
R2716 100K
C2714 0.01 F
C2715 0.1 F
R2709 270
R2710 820
R2711 1K
R2712 2.2K
HALL VCC(-)
HW (-)
HW (+)
HU (-)
HU (+)
HV (-)
HV (+)
HALL VCC (+)
LU
LV
LW
CYL FG (-)
CYL FG (+)
CYL PG (-)
CYL PG (+)
CP2701
CYLINDER MOTOR
⑩ 3.6V P-P
⑪ 125mV P-P
⑫ 20mV P-P
FROM/TO SERVO
CX2702
1 M.D UNREG 6.0V
2 CTL. ON
3 M.D UNREG 6.0V
4 CYL. EC
5 CYL. GND
6 CAP.FG.
7 CAP. VM
8 TRI. WAVE
9 CAP. SW.
10 P-CON 5V
11 CAP EC
12 CAP/CYL ECR
13 CAP. DIRECTION
14 CAP.FG.GND
15 GND
16 MOTOR GND
CAPSTAN MOTOR CONTROL IC2701 AN3890FBS
AMP MATRIX
R2724 1K
C2720 0.033 F
C2719 0.047 F
R2723 2.2K
R2722 39K
C2721 16V10
R2726 1K
R2727 1K
C2722 0.1 F
C2723 0.01 F
C2724 0.01 F
C2725 0.01 F
CAPSTAN MOTOR DRIVE IC2702 TD62M3702F
⑬ 1.4V P-P
⑭ 80mV P-P
R2732 100
C2730 0.1 F
C2797 6.3V47
R2733 1.2K
R2734 1K
CAP FG GND
CAP FG OUT
CAP FG VCC
LW
LU
LV
HALL VCC (+)
HALL VCC (-)
HU (-)
HU (+)
HV (-)
HV (+)
HW (-)
HW (+)
CP2702
CAPSTAN MOTOR
PCB271 VV0244

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

MOTOR DRIVE SCHEMATIC DIAGRAM

1-12046

SSG SCHEMATIC DIAGRAM

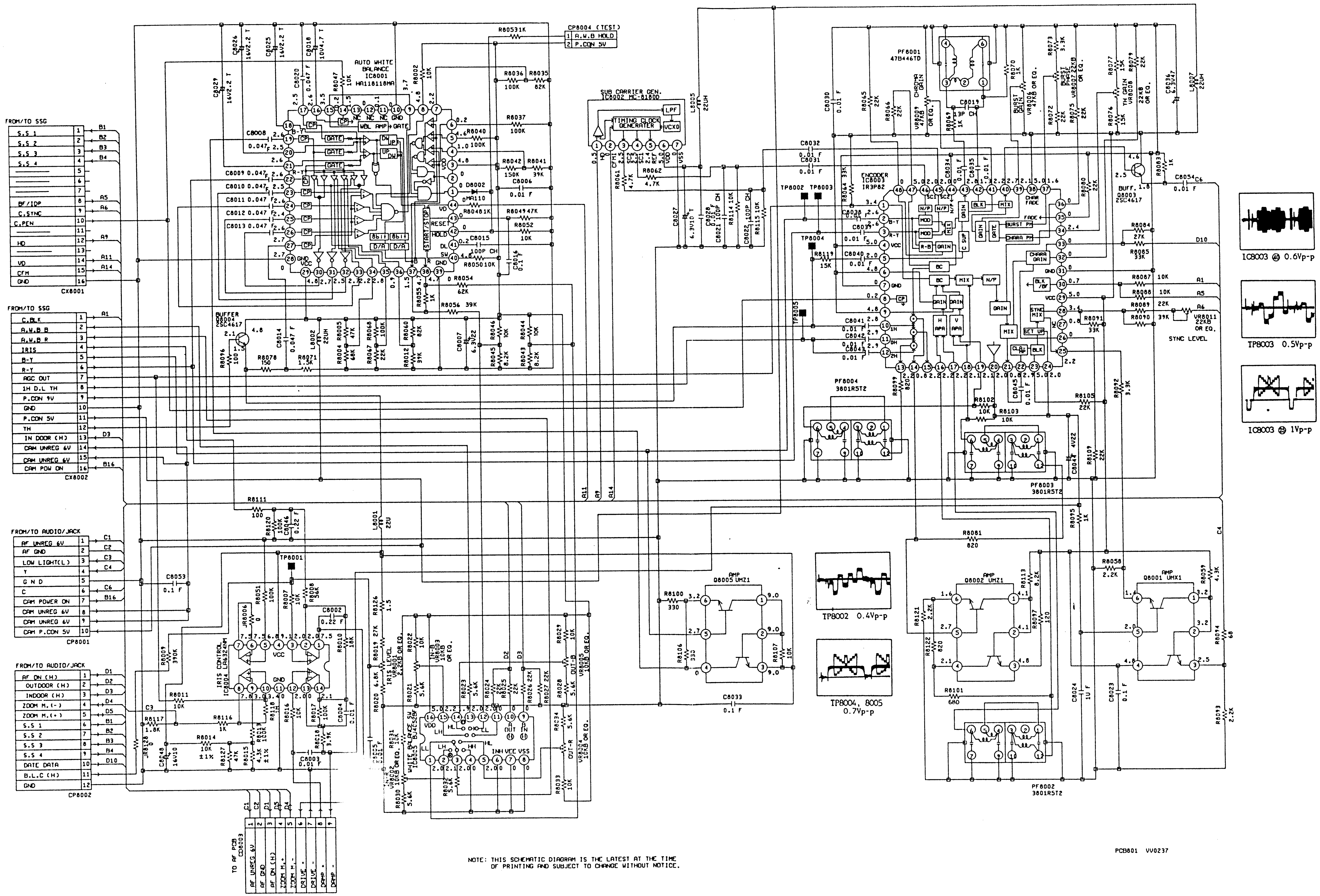

TP7002 5Vp-p
TP7004 0.4Vp-p
TP7005 0.2Vp-p
TP7001 4Vp-p
TP7014 0.8Vp-p
TP7007,7010,7011,7013 0.3Vp-p
TP7003 0.3Vp-p
TP7006 0.45Vp-p
TP7008 0.7Vp-p
TIMING GEN. IC7004 MN5179
CCD V-DRIVER IC7002 MN3110S
CCD IMAGER IC7001 MN3725FE
AGC,S/H IC7007 IR3P97
SYNC SIGNAL GEN. IC7005 MN5107
4CH PROCESS IC7006 IR3P81
IC7010 SW TC74HC4053AF
INV. IC7008 TC7S04F
PCB702 VU0238
PCB701 VU0236
MODE TV1 TV2
NTSC L L
PAL H L
SECAM H H
FROM/TO CAMERA VIDEO CY7001
1 S.S 1
2 S.S 2
3 S.S 3
4 S.S 4
8 BF/IDP
9 C SYNC
10 C PEN
12 HD
14 VD
15 CFM
16 GND
FROM/TO CAMERA VIDEO CY7002
1 C BLK
2 A.W.B B
3 A.W.B R
4 IRIS
5 B-Y
6 R-Y
7 AGC OUT
8 1H D.L YH
9 P.CON 9V
10 GND
11 P.CON 5V
12 TH
13 INDOOR ⊕
14 CAM UNREG 6V
15 CAM UNREG 6V
16 CAM POWER ON
FROM/TO DC-DC CONVERTER CX7001
1 GND
2 CAM POWER ON
3 CAM UNREG 6V
4 GND
5 GND
6 P.CON 9V
7 P.CON 5V
8 P.CON 20V
9 P.CON 15.5V
10 P.CON -8V
PF7009-PF7010 NFM41R10Z22T1
YH SETUP B SETUP R SETUP R-Y GAIN B-Y GAIN
VR7005~VR7009 22KB OR EQ.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

SSG SCHEMATIC DIAGRAM

1-12050

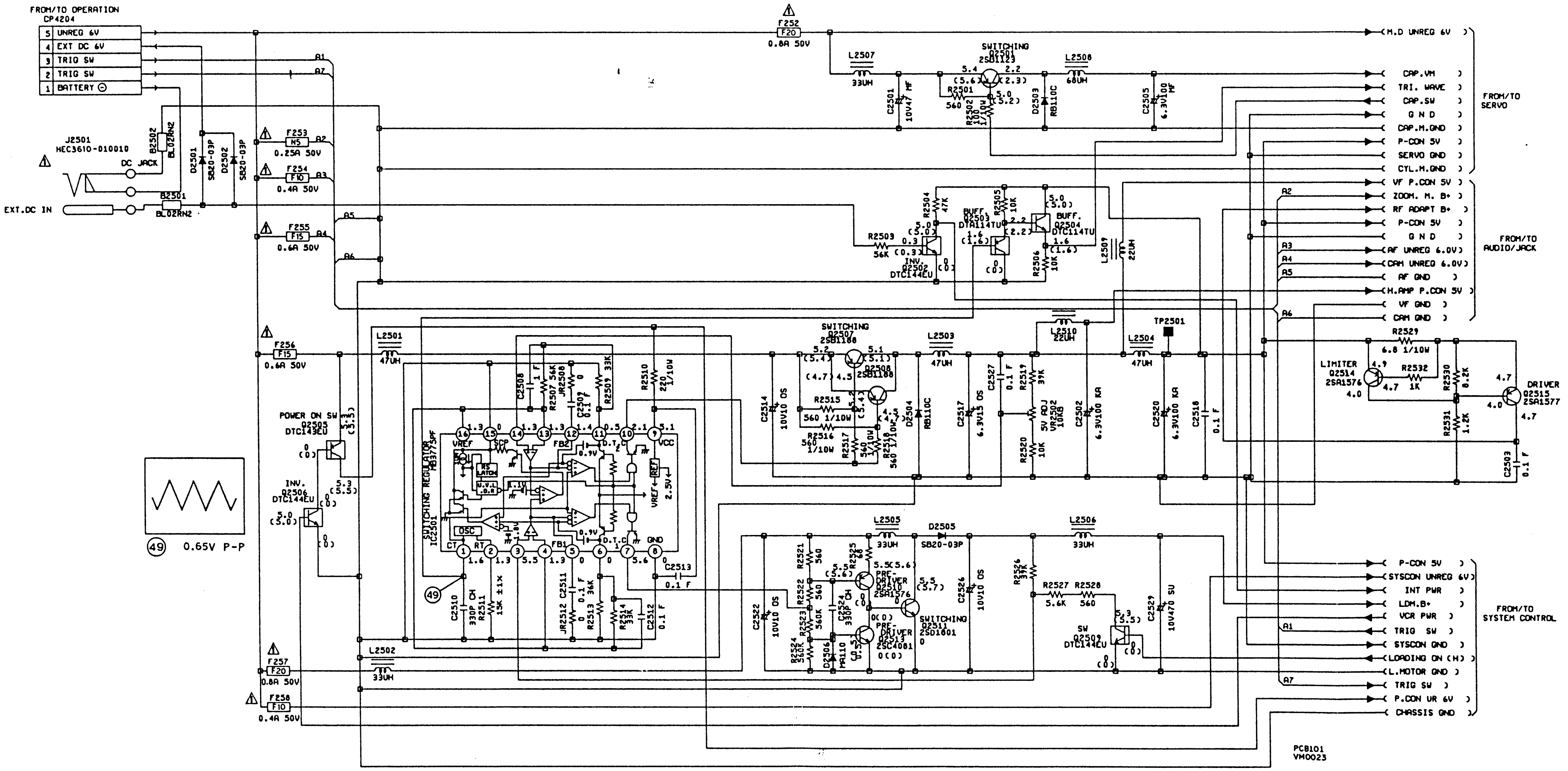
CAMERA VIDEO SCHEMATIC DIAGRAM


FROM/TO SSG
CX8001
CX8002
FROM/TO AUDIO/JACK
CP8001
CP8002
AUTO WHITE BALANCE IC8001 HA118118MA
CP8004 (TEST)
A.W.B HOLD
P.CON 5V
SUB CARRIER GEN. IC8002 MC-8180D
TIMING CLOCK GENERATER
LPF
VCXO
ENCODER IC8003 IR3P82
PF8001 47B446TD
BUFFER Q8004 2SC4617
BUFF. Q8003 2SC4617
PF8004 3801R5T2
PF8003 3801R5T2
PF8002 3801R5T2
AMP Q8005 UMZ1
AMP Q8002 UMZ1
AMP Q8001 UMX1
IRIS CONTROL IC8004 LA6324NM
WHITE BALANCE SW IC8005 BU4052BF
TP8001
TP8002
TP8003
TP8004
TP8005
IC8003 ㊵ 0.6Vp-p
TP8003 0.5Vp-p
IC8003 ㉙ 1Vp-p
TP8002 0.4Vp-p
TP8004, 8005 0.7Vp-p
SYNC LEVEL
TO AF PCB CD8003
PCB801 VV0237

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

CAMERA VIDEO SCHEMATIC DIAGRAM

POWER SUPPLY SCHEMATIC DIAGRAM

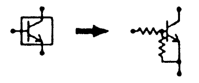

FROM/TO OPERATION
CP4204
5 UNREG 6V
4 EXT DC 6V
3 TRIG SW
2 TRIG SW
1 BATTERY ⊖
J2501
HEC3610-010010
DC JACK
EXT.DC IN
B2502
BL02RN2
B2501
BL02RN2
D2501
SB20-03P
D2502
SB20-03P
F253
N5
0.25A 50V
F254
F10
0.4A 50V
F255
F15
0.6A 50V
F256
F15
0.6A 50V
F257
F20
0.8A 50V
F258
F10
0.4A 50V
F252
F20
0.8A 50V
A1
A2
A3
A4
A5
A6
A7
L2507
33UH
C2501
10V47 MF
SWITCHING
Q2501
2SB1123
5.4
(5.6)
2.2
(2.3)
5.0
(5.2)
R2501
560
R2502
100
1/10W
D2503
RB110C
L2508
68UH
C2505
6.3V100 MF
R2503
56K
R2504
47K
INV.
Q2502
DTC144EU
BUFF.
Q2503
DTA114TU
R2505
10K
BUFF.
Q2504
DTC114TU
R2506
10K
L2509
22UH
L2501
47UH
L2502
33UH
POWER ON SW
Q2505
DTC143EU
INV.
Q2506
DTC144EU
SWITCHING REGULATOR
IC2501
MB3775PF
VREF
SCP
FB2
D.T.C
VCC
RS LATCH
U.V.L.O.R
OSC
REF
VREF 2.5V
CT
RT
FB1
GND
C2508
1 F
R2507 56K
JR2508
0
C2509
0.1 F
R2509 33K
R2510
220
1/10W
C2510
330P CH
R2511
15K ±1%
JR2512
0
C2511
0.1 F
R2513 36K
R2514
33K
C2512
0.1 F
C2513
0.1 F
(49)
0.65V P-P
SWITCHING
Q2507
2SB1188
Q2508
2SB1188
R2515
560 1/10W
R2516
560
1/10W
R2517
560
1/10W
R2518
560 1/10W
C2514
10V10 OS
D2504
RB110C
L2503
47UH
C2517
6.3V15 OS
C2527
0.1 F
R2519
39K
5V ADJ
VR2502
10KB
R2520
10K
C2502
6.3V100 KA
L2510
22UH
L2504
47UH
TP2501
C2520
6.3V100 KA
C2518
0.1 F
R2529
6.8 1/10W
LIMITER
Q2514
2SA1576
R2532
1K
R2530
8.2K
R2531
1.2K
DRIVER
Q2515
2SA1577
C2503
0.1 F
L2505
33UH
D2505
SB20-03P
L2506
33UH
R2521
560
R2522
560
R2523
560K
R2524
560K
R2525
68
C2524
330P CH
D2506
MA110
PRE-DRIVER
Q2510
2SA1576
PRE-DRIVER
Q2513
2SC4081
SWITCHING
Q2511
2SD1601
C2522
10V10 OS
C2526
10V10 OS
R2526
39K
R2527
5.6K
R2528
560
SW
Q2509
DTC144EU
C2529
10V470 SU
M.D UNREG 6V
CAP.VM
TRI. WAVE
CAP.SW
G N D
CAP.M.GND
P-CON 5V
SERVO GND
CYL.M.GND
FROM/TO SERVO
VF P.CON 5V
ZOOM. M. B+
RF ADAPT B+
P-CON 5V
G N D
AF UNREG 6.0V
CAM UNREG 6.0V
AF GND
H.AMP P.CON 5V
VF GND
CAM GND
FROM/TO AUDIO/JACK
P-CON 5V
SYSCON UNREG 6V
INT PWR
LDM.B+
VCR PWR
TRIG SW
SYSCON GND
LOADING ON (H)
L.MOTOR GND
TRIG SW
P.CON UR 6V
CHASSIS GND
FROM/TO SYSTEM CONTROL
PCB101
VM0023

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE
CRITICAL FOR SAFETY, USE ONES
DESCRIBED ON PARTS LIST ONLY.

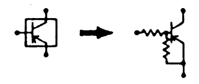
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT
DANGEREUSES AN POINT DE VUE SECURITE
N'UTILISER QUE CELLS DECRITES
DANS LA NOMENCLATURE DES PIECES.

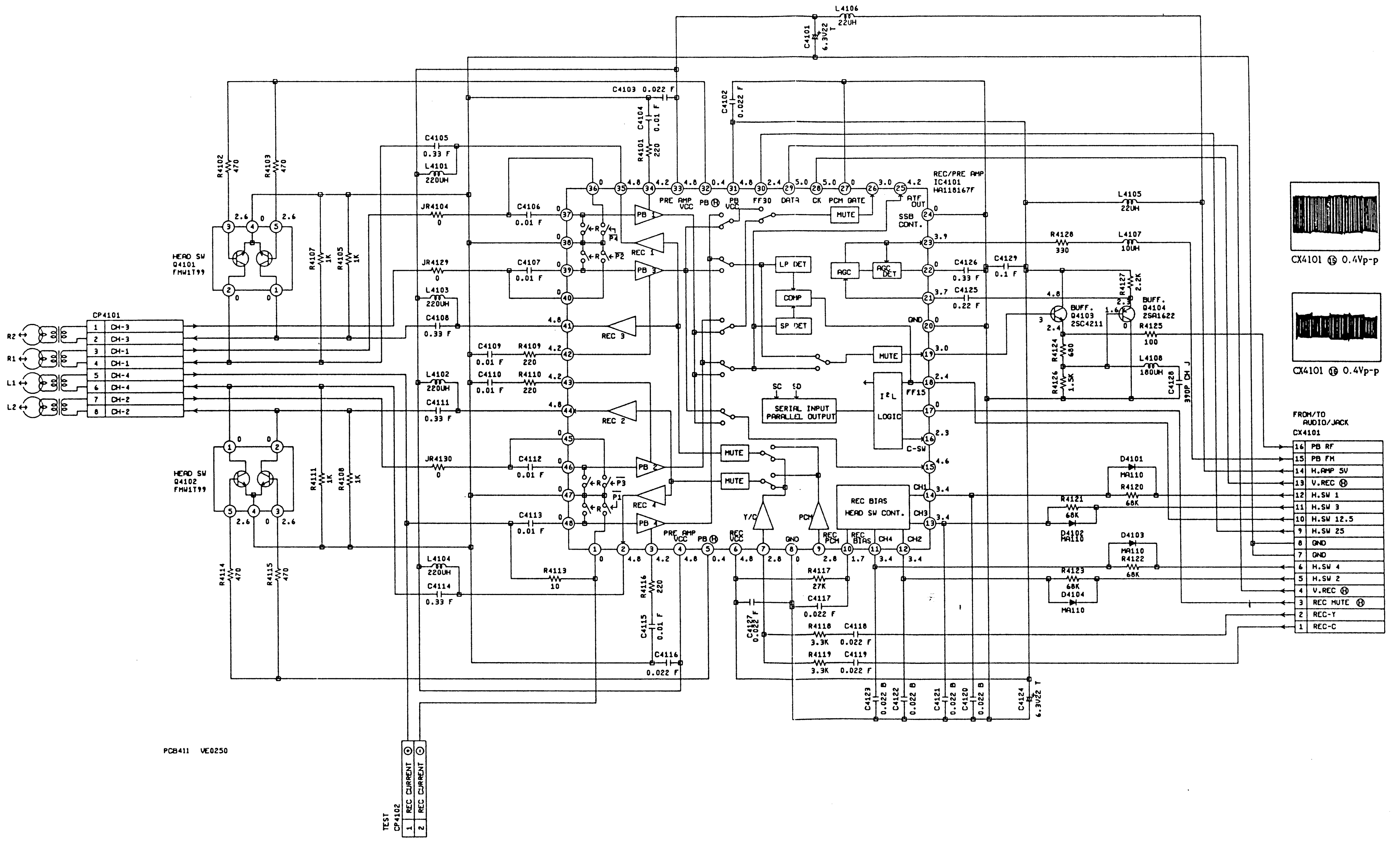
CAUTION: DIGITAL TRANSISTOR



CAUTION: DIGITAL TRANSISTOR



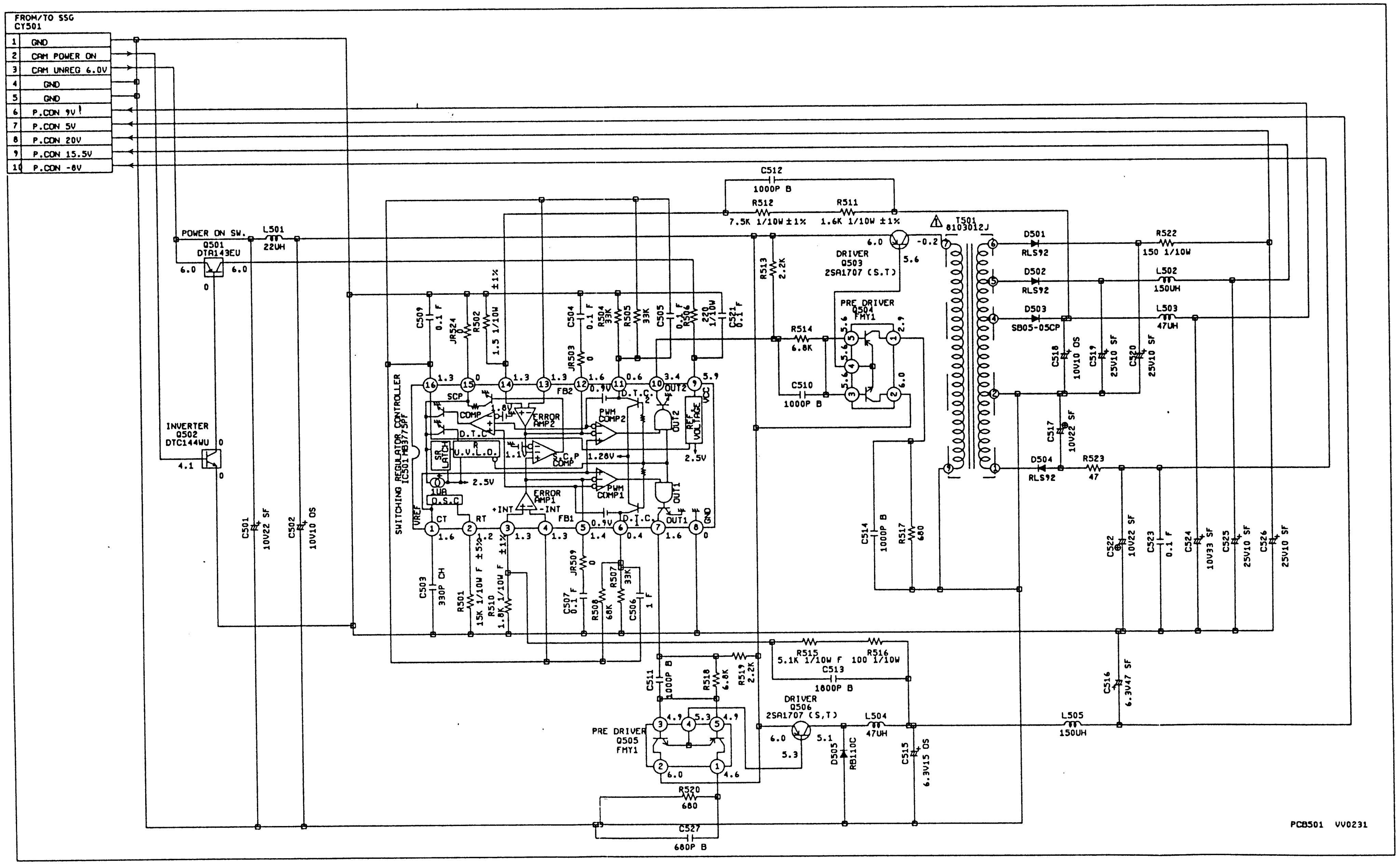
HEAD AMP SCHEMATIC DIAGRAM



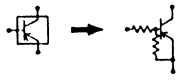
L4106 22UH
C4101 6.3V22
C4103 0.022 F
C4102 0.022 F
C4104 0.01 F
R4101 220
C4105 0.33 F
L4101 220UH
R4102 470
R4103 470
JR4104 0
C4106 0.01 F
JR4129 0
C4107 0.01 F
L4103 220UH
C4108 0.33 F
HEAD SW Q4101 FMW1T99
R4107 1K
R4105 1K
CP4101
1 CH-3
2 CH-3
3 CH-1
4 CH-1
5 CH-4
6 CH-4
7 CH-2
8 CH-2
R2
R1
L1
L2
C4109 0.01 F
R4109 220
C4110 0.01 F
R4110 220
L4102 220UH
C4111 0.33 F
HEAD SW Q4102 FMW1T99
R4111 1K
R4108 1K
JR4130 0
C4112 0.01 F
C4113 0.01 F
L4104 220UH
C4114 0.33 F
R4113 10
R4114 470
R4115 470
R4116 220
C4115 0.01 F
C4116 0.022 F
PRE AMP VCC
PB Ⓗ
PB VCC
FF30
DATA
CK
PCM GATE
ATF OUT
REC/PRE AMP IC4101 HA118167F
MUTE
SSB CONT.
PB 1
REC 1
PB 3
REC 3
REC 2
PB 2
REC 4
PB 4
P4
P2
P3
P1
LP DET
COMP
SP DET
AGC
AGC DET
MUTE
SC SD
SERIAL INPUT PARALLEL OUTPUT
I²L LOGIC
FF15
C-SW
MUTE
MUTE
Y/C
PCM
REC BIAS HEAD SW CONT.
CH1
CH3
CH4
CH2
REC VCC
GND
REC PCM
REC BIAS
R4117 27K
C4117 0.022 F
C4127 0.022 F
R4118 3.3K
C4118 0.022 F
R4119 3.3K
C4119 0.022 F
C4123 0.022 B
C4122 0.022 B
C4121 0.022 B
C4120 0.022 B
C4124 6.3V22 T
C4126 0.33 F
C4125 0.22 F
C4129 0.1 F
R4128 330
L4105 22UH
L4107 10UH
R4127 2.2K
BUFF. Q4103 2SC4211
BUFF. Q4104 2SA1622
R4125 100
R4124 600
R4126 1.5K
L4108 180UH
C4128 390P CH J
D4101 MA110
R4120 68K
R4121 68K
D4102 MA110
D4103 MA110
R4122 68K
R4123 68K
D4104 MA110
CX4101 ⑮ 0.4Vp-p
CX4101 ⑯ 0.4Vp-p
FROM/TO AUDIO/JACK CX4101
16 PB RF
15 PB FM
14 H.AMP 5V
13 V.REC Ⓗ
12 H.SW 1
11 H.SW 3
10 H.SW 12.5
9 H.SW 25
8 GND
7 GND
6 H.SW 4
5 H.SW 2
4 V.REC Ⓗ
3 REC MUTE Ⓗ
2 REC-Y
1 REC-C
TEST CP4102
1 REC CURRENT
2 REC CURRENT
PCB411 VE0250

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

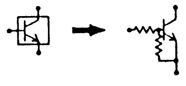
DC-DC CONVERTER SCHEMATIC DIAGRAM


FROM/TO SSG
CY501
1 GND
2 CAM POWER ON
3 CAM UNREG 6.0V
4 GND
5 GND
6 P.CON 9V
7 P.CON 5V
8 P.CON 20V
9 P.CON 15.5V
10 P.CON -8V
POWER ON SW.
Q501
DTA143EU
L501
22UH
INVERTER
Q502
DTC144WU
C501 10V22 SF
C502 10V10 OS
SWITCHING REGULATOR CONTROLLER
IC501 MB3775PF
C509 0.1 F
JR524 0
R502
1.5 1/10W ±1%
C504 0.1 F
JR503 0
R504 33K
R505 33K
C505 0.1 F
R506 220 1/10W
C521 0.1 F
SCP
COMP
ERROR AMP2
FB2
D.T.C.2
PWM COMP2
OUT2
REF VOLTAGE
VCC
SR LATCH
U.V.L.O.
S.C.P COMP
1.28V
2.5V
1UA
O.S.C
ERROR AMP1
+INT
-INT
PWM COMP1
OUT1
D.T.C.1
VREF
CT
RT
FB1
GND
C503 330P CH
R501 15K 1/10W F ±5%
R510 1.8K 1/10W F ±1%
JR509 0
C507 0.1 F
R508 68K
R507 33K
C506 1 F
C512
1000P B
R512
7.5K 1/10W ±1%
R511
1.6K 1/10W ±1%
T501
8103012J
DRIVER
Q503
2SA1707 (S.T)
R513 2.2K
PRE DRIVER
Q504
FMY1
R514
6.8K
C510
1000P B
C514 1000P B
R517 680
D501
RLS92
D502
RLS92
D503
SB05-05CP
D504
RLS92
R522
150 1/10W
L502
150UH
L503
47UH
R523
47
C518 10V10 OS
C519 25V10 SF
C520 25V10 SF
C517 10V22 SF
C522 10V22 SF
C523 0.1 F
C524 10V33 SF
C525 25V10 SF
C526 25V10 SF
R515
5.1K 1/10W F
R516
100 1/10W
C513
1800P B
C511 1000P B
R518 6.8K
R519 2.2K
PRE DRIVER
Q505
FMY1
DRIVER
Q506
2SA1707 (S,T)
L504
47UH
D505 RB110C
C515 6.3V15 OS
C516 6.3V47 SF
L505
150UH
R520
680
C527
680P B
PCB501 VV0231

CAUTION: DIGITAL TRANSISTOR



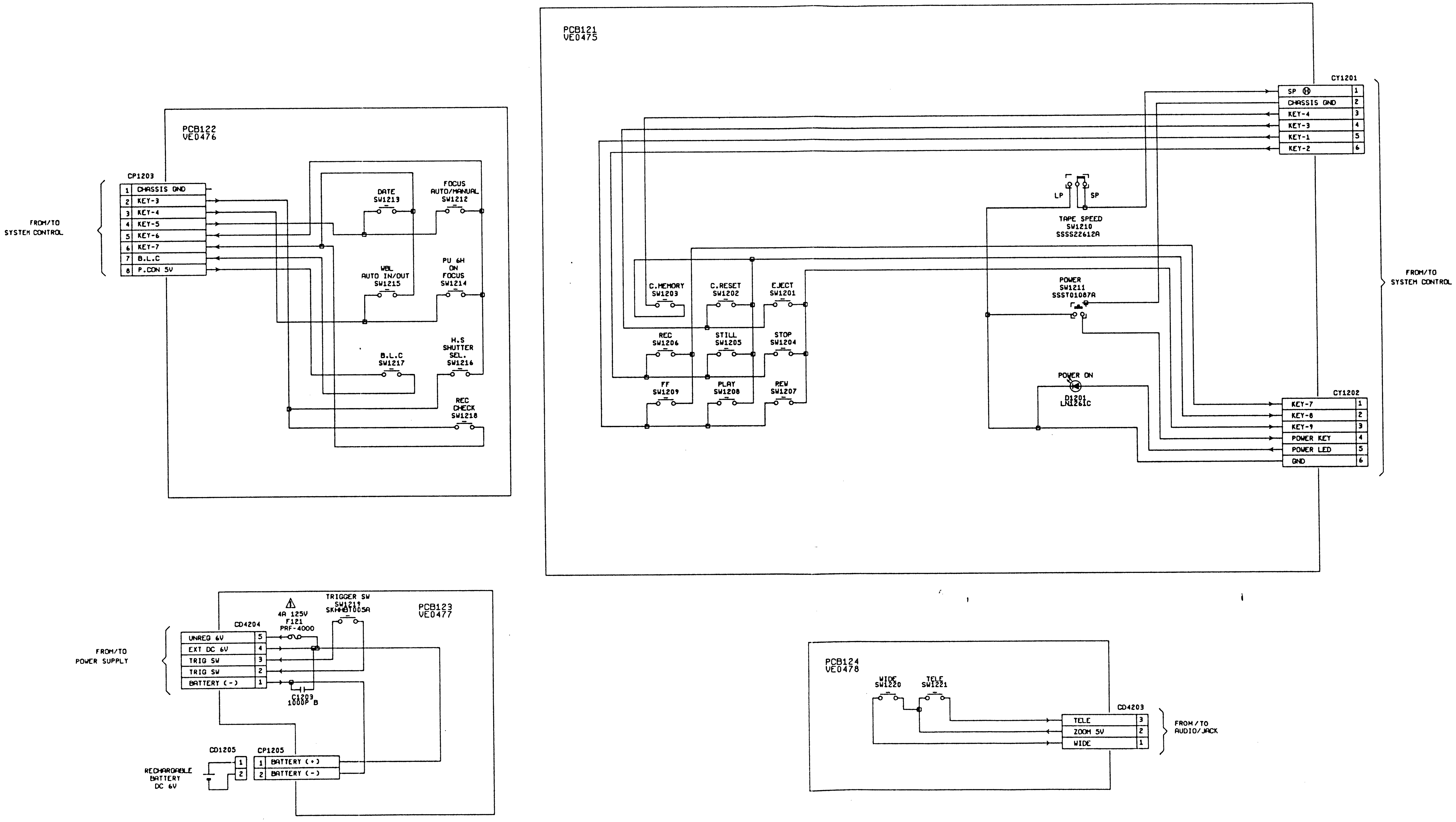
CAUTION: DIGITAL TRANSISTOR



NOTE: F MARKED AROUND THE PARTS
IN THE SCHEMATIC DIAGRAM INDICATES
THE FOLLOWING ERROR RATE.
F: ±1%

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

OPERATION/REC SW/ZOOM SW SCHEMATIC DIAGRAM


PCB122
VE0476
CP1203
1 CHASSIS GND
2 KEY-3
3 KEY-4
4 KEY-5
5 KEY-6
6 KEY-7
7 B.L.C
8 P.CON 5V
FROM/TO
SYSTEM CONTROL
DATE
SW1213
FOCUS
AUTO/MANUAL
SW1212
WBL
AUTO IN/OUT
SW1215
PU 6H
ON
FOCUS
SW1214
B.L.C
SW1217
H.S
SHUTTER
SEL.
SW1216
REC
CHECK
SW1218
PCB121
VE0475
CY1201
SP Ⓗ 1
CHASSIS GND 2
KEY-4 3
KEY-3 4
KEY-1 5
KEY-2 6
FROM/TO
SYSTEM CONTROL
LP
SP
TAPE SPEED
SW1210
SSSS22612A
C.MEMORY
SW1203
C.RESET
SW1202
EJECT
SW1201
REC
SW1206
STILL
SW1205
STOP
SW1204
FF
SW1209
PLAY
SW1208
REW
SW1207
POWER
SW1211
SSST01087A
POWER ON
D1201
LN1261C
CY1202
KEY-7 1
KEY-8 2
KEY-9 3
POWER KEY 4
POWER LED 5
GND 6
FROM/TO
POWER SUPPLY
CD4204
UNREG 6V 5
EXT DC 6V 4
TRIG SW 3
TRIG SW 2
BATTERY (-) 1
⚠
4A 125V
F121
PRF-4000
TRIGGER SW
SW1219
SKHHBT005A
PCB123
VE0477
C1203
1000P B
CD1205
CP1205
1 BATTERY (+)
2 BATTERY (-)
RECHARGABLE
BATTERY
DC 6V
PCB124
VE0478
WIDE
SW1220
TELE
SW1221
CD4203
TELE 3
ZOOM 5V 2
WIDE 1
FROM/TO
AUDIO/JACK

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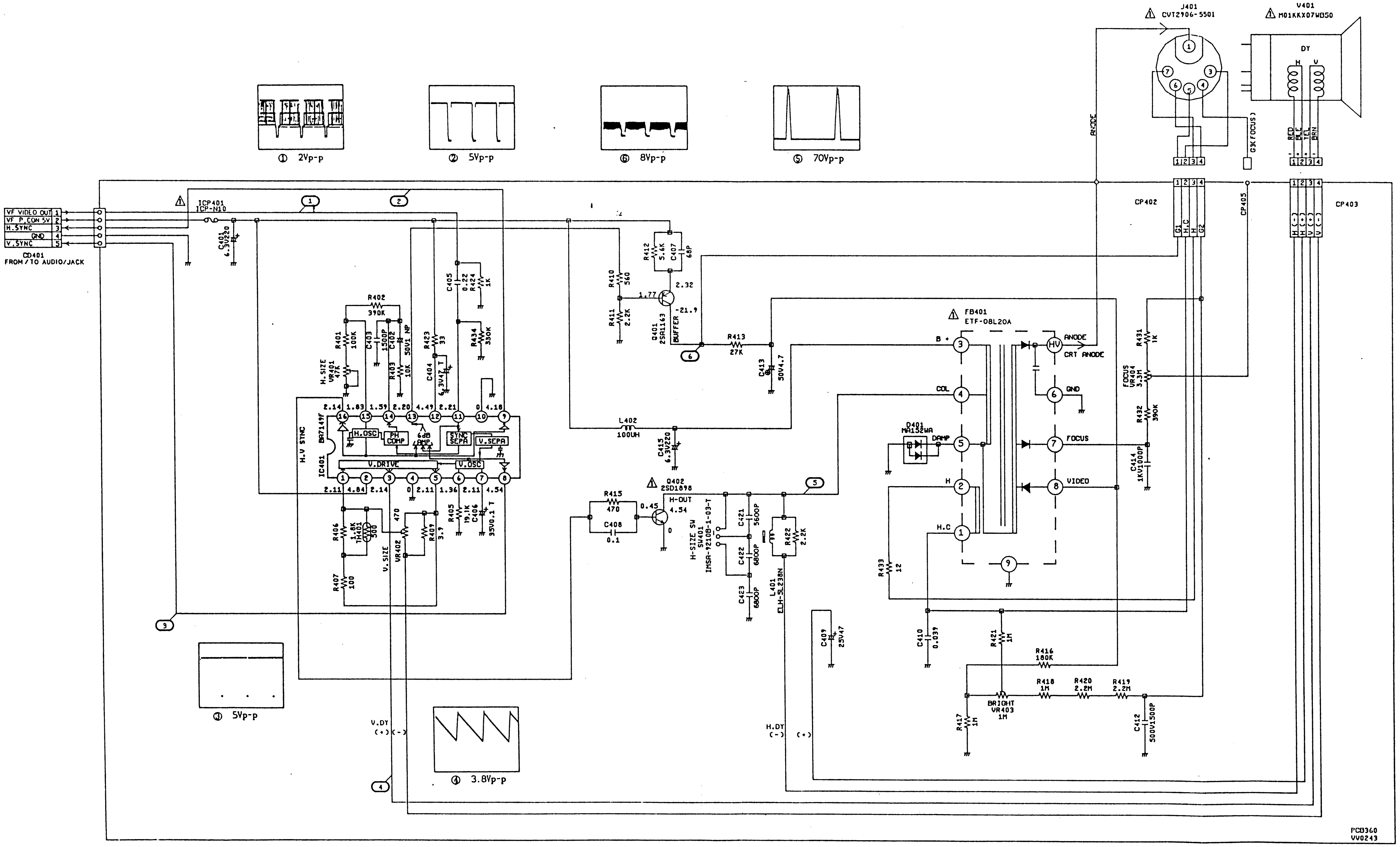
DANGEREUSES AN POINT DE VUE SECURITE
N'UTILISER QUE CELLS DECRITES
DANS LA NOMENCLATURE DES PIECES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

OPERATION/REC SW/ZOOM SW
SCHEMATIC DIAGRAM
1-12044

VIEWFINDER SCHEMATIC DIAGRAM


① 2Vp-p
② 5Vp-p
⑥ 8Vp-p
⑤ 70Vp-p
③ 5Vp-p
④ 3.8Vp-p
VF VIDEO OUT 1
VF P.CON 5V 2
H.SYNC 3
GND 4
V.SYNC 5
CD401
FROM / TO AUDIO/JACK
ICP401
ICP-N10
C401 6.3V220
C405 0.22
R424 1K
R402 390K
R401 100K
C403 1500P
C402 50V1 NP
R403 10K
R423 33
C404 6.3V47 T
R434 330K
H.SIZE VR401 47K
H.V SYNC
IC401 BA7149F
H.OSC
PH COMP
6dB AMP
SYNC SEPA
V.SEPA
V.DRIVE
V.OSC
2.14 1.83 1.59 2.20 4.49 2.21 0 4.18
2.11 4.84 2.14 0 2.11 1.36 2.11 4.54
R406 1.8K
TH401 500
R407 100
V.SIZE VR402 470
R409 3.9
R405 19.1K
C406 35V0.1 T
V.DY (+) (-)
H.DY (-) (+)
R410 560
R411 2.2K
R412 5.6K
C407 68P
1.77
2.32
-21.9
Q401 2SA1163 BUFFER
R413 27K
C413 50V4.7
L402 100UH
C415 6.3V220
Q402 2SD1898
H-OUT
R415 470
C408 0.1
0.45
4.54
0
H-SIZE SW SW401 IMSA-9210B-1-03-T
C421 5600P
C422 6800P
C423 6800P
R422 2.2K
L401 ELH-5L238N
C409 25V47
FB401 ETF-08L20A
B+ 3
COL 4
DAMP 5
H 2
H.C 1
9
HV ANODE
CRT ANODE
6 GND
7 FOCUS
8 VIDEO
D401 MA152WA
R433 12
C410 0.039
R421 1M
R416 180K
R418 1M
R420 2.2M
R419 2.2M
BRIGHT VR403 1M
R417 1M
C412 500V1500P
R431 1K
FOCUS VR404 3.3M
R432 390K
C414 1KV1000P
J401 CVT2906-5501
V401 M01KKX07WB50
DY
H
V
ANODE
G3(FOCUS)
RED BLE YEL BRN
- + + -
1 2 3 4
CP402
G1 H.C H G2
CP405
CP403
H(-) H(+) V(+) V(-)
PCB360
VV0243

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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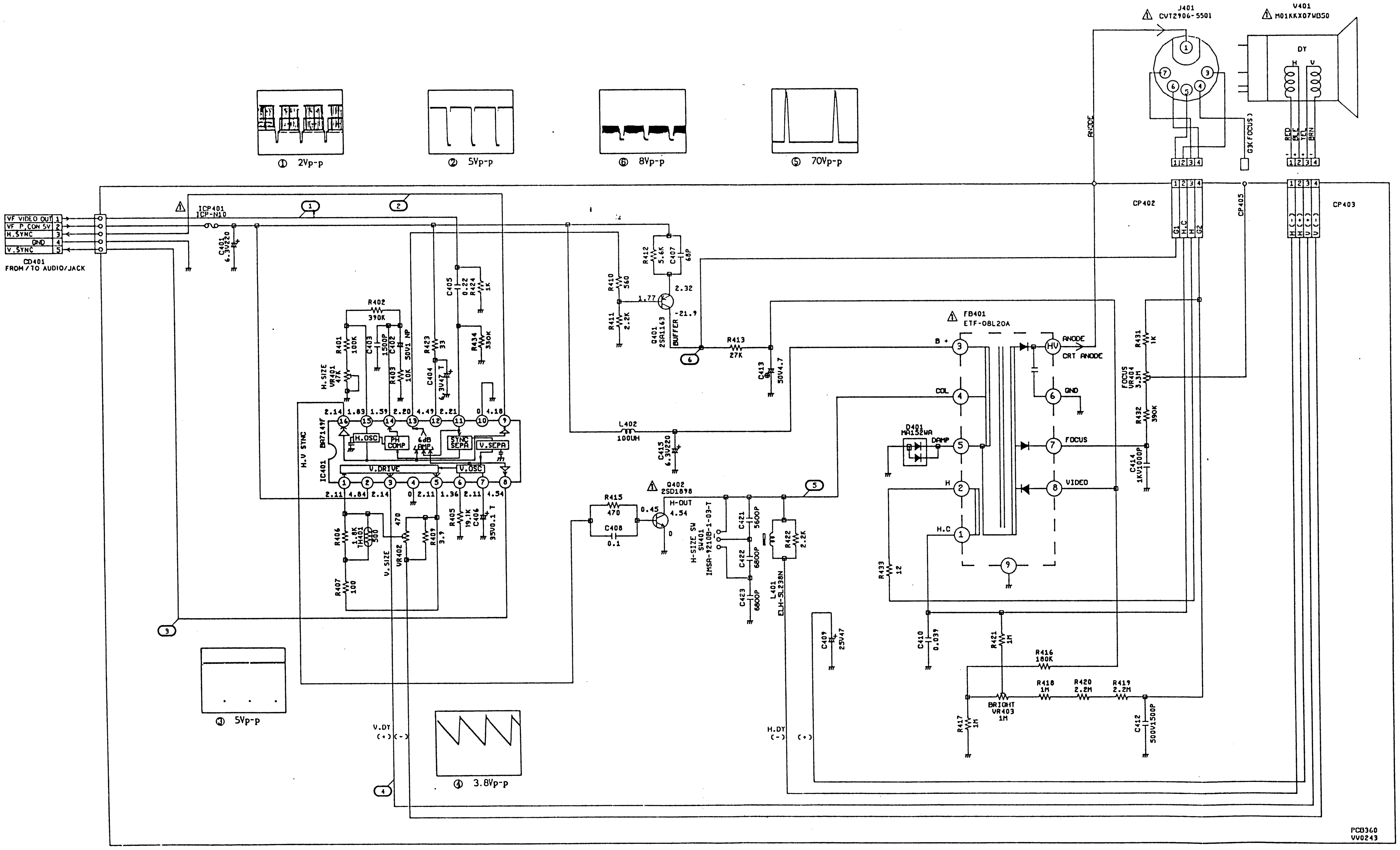
VIEWFINDER SCHEMATIC DIAGRAM


① 2Vp-p
② 5Vp-p
⑥ 8Vp-p
⑤ 70Vp-p
③ 5Vp-p
④ 3.8Vp-p
VF VIDEO OUT 1
VF P.CON 5V 2
H.SYNC 3
GND 4
V.SYNC 5
CD401
FROM / TO AUDIO/JACK
ICP401
ICP-N10
C401
6.3V220
R402
390K
R401
100K
C403
1500P
C402
50V1 NP
R403
10K
H.SIZE
VR401
47K
C405
0.22
R424
1K
R423
33
C404
3V47 T
R434
330K
IC401
BA7149F
H.V SYNC
H.OSC
PH COMP
6dB AMP
SYNC SEPA
V.SEPA
V.DRIVE
V.OSC
R406
1.8K
TH401
500
R407
100
V.SIZE
VR402
470
R409
3.9
R405
19.1K
C406
35V0.1 T
R410
560
R411
2.2K
R412
5.6K
C407
68P
Q401
2SA1163
BUFFER
1.77
2.32
-21.9
R413
27K
C413
50V4.7
L402
100UH
C415
6.3V220
Q402
2SD1898
H-OUT
R415
470
C408
0.1
0.45
4.54
H-SIZE SW
SW401
IMSA-9210B-1-03-T
C421
5600P
C422
6800P
C423
6800P
R422
2.2K
L401
ELH-5L238N
C409
25V47
FB401
ETF-08L20A
B+
COL
DAMP
H
H.C
HV
ANODE
CRT ANODE
GND
FOCUS
VIDEO
D401
MA152WA
R433
12
C410
0.039
R421
1M
R416
180K
R418
1M
R420
2.2M
R419
2.2M
BRIGHT
VR403
1M
R417
1M
C412
500V1500P
R431
1K
FOCUS
VR404
3.3M
R432
390K
C414
1KV1000P
ANODE
J401
CVT2906-5501
V401
M01KKX07WB50
DY
H
V
G3(FOCUS)
RED
BLK
YEL
BRN
CP402
G1
H.C
H
G2
CP405
CP403
H(-)
H(+)
V(+)
V(-)
V.DY
(+)
(-)
H.DY
(-)
(+)
PCB360
VV0243

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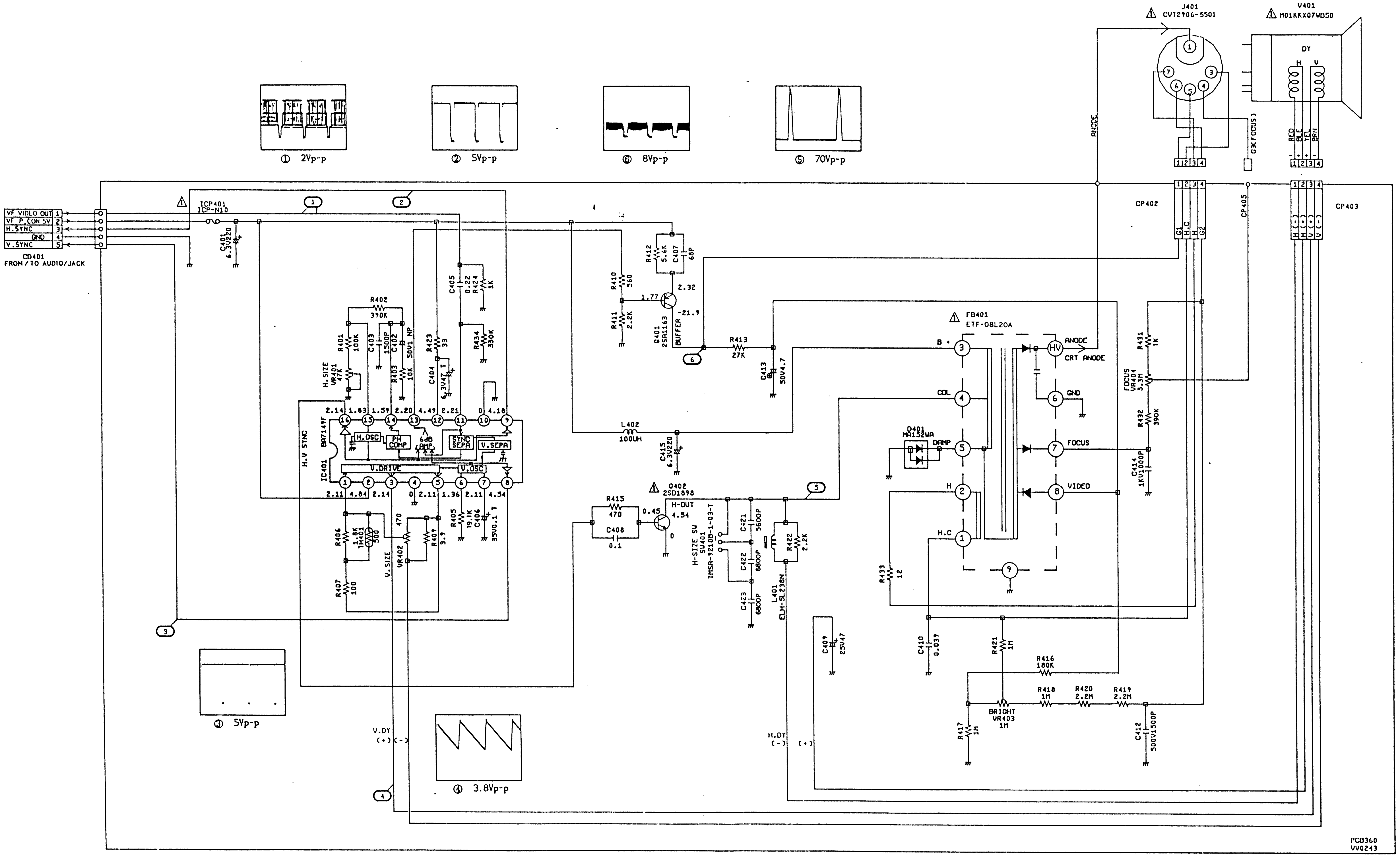
VIEWFINDER SCHEMATIC DIAGRAM

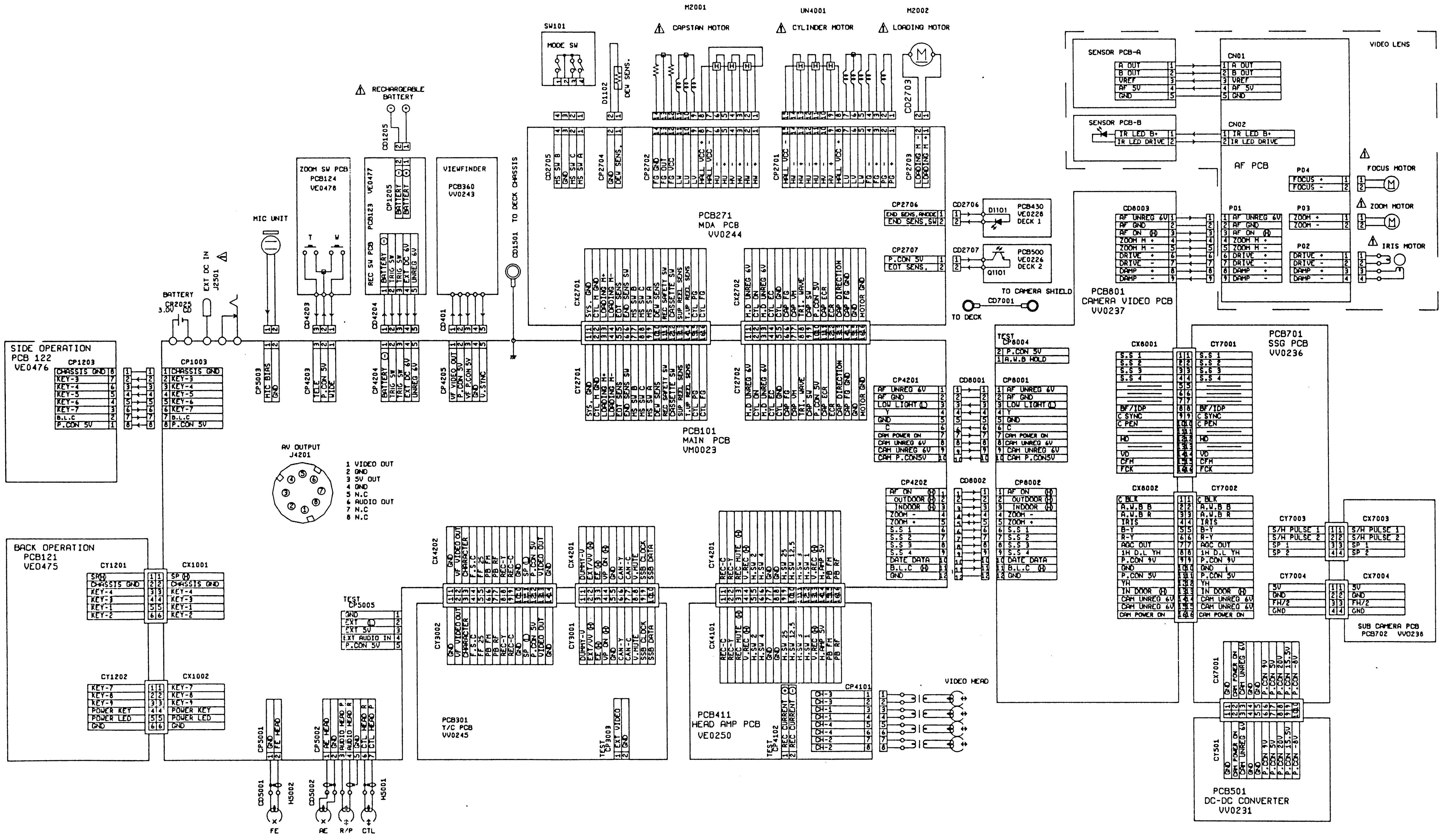


① 2Vp-p
② 5Vp-p
⑥ 8Vp-p
⑤ 70Vp-p
③ 5Vp-p
④ 3.8Vp-p
VF VIDEO OUT
VF P.CON 5V
H.SYNC
GND
V.SYNC
CD401
FROM / TO AUDIO/JACK
ICP401
ICP-N10
C401
6.3V220
R402
390K
R401
100K
C403
1500P
C402
50V1 NP
R423
33
R434
330K
C405
0.22
R424
1K
H.SIZE
VR401
47K
R403
10K
C404
6.3V47 T
IC401
BA7149F
H.V SYNC
H.OSC
PH COMP
6dB AMP
SYNC SEPA
V.SEPA
V.DRIVE
V.OSC
R406
1.8K
TH401
500
R407
100
V.SIZE
VR402
470
R409
3.9
R405
19.1K
C406
35V0.1 T
R412
5.6K
C407
68P
R410
560
R411
2.2K
Q401
2SA1163
BUFFER
R413
27K
C413
50V4.7
L402
100UH
C415
6.3V220
R415
470
C408
0.1
Q402
2SD1898
H-OUT
H-SIZE SW
SW401
IMSA-9210B-1-03-T
C421
5600P
C422
6800P
C423
6800P
R422
2.2K
L401
ELH-5L238N
C409
25V47
C410
0.039
R433
12
R421
1M
R416
180K
R418
1M
R420
2.2M
R419
2.2M
BRIGHT
VR403
1M
R417
1M
C412
500V1500P
FB401
ETF-08L20A
B+
COL
H
H.C
HV
ANODE
CRT ANODE
GND
FOCUS
VIDEO
DAMP
D401
MA152WA
R431
1K
FOCUS
VR404
3.3M
R432
390K
C414
1KV1000P
J401
CVT2906-5501
V401
M01KKX07WD50
DY
G3(FOCUS)
ANODE
CP402
CP403
CP405
G1
H.C
G2
H(-)
H(+)
V(+)
V(-)
RED
BLE
YEL
BRN
V.DY
(+) (-)
H.DY
(-) (+)
PCD360
VV0243

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

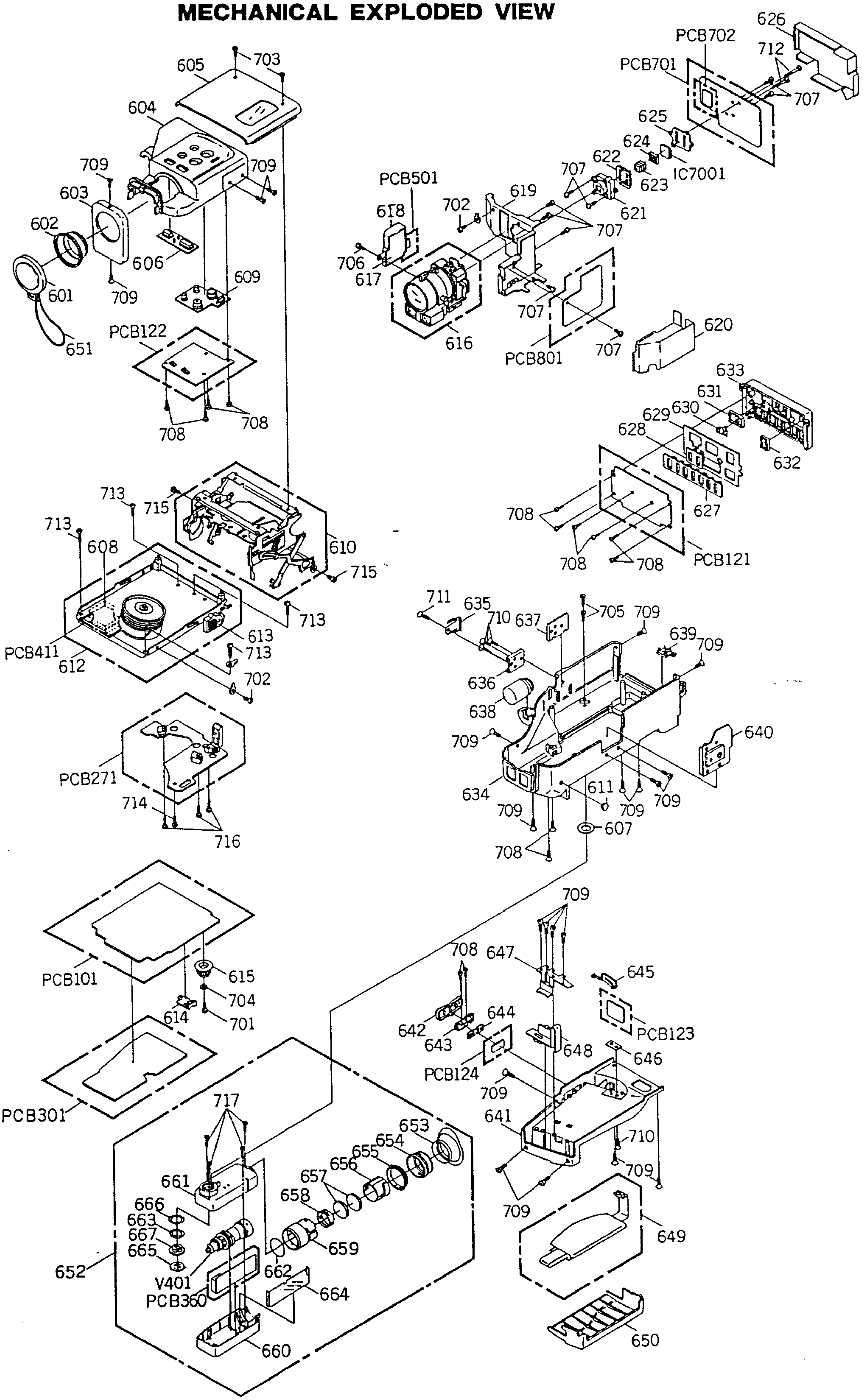
CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE
CRITICAL FOR SAFETY, USE ONES
DESCRIBED ON PARTS LIST ONLY.

INTERCONNECTION DIAGRAM


M2001
CAPSTAN MOTOR
UN4001
CYLINDER MOTOR
M2002
LOADING MOTOR
SW101
MODE SW
D1102
DEW SENS.
RECHARGEABLE BATTERY
CD1205
ZOOM SW PCB
PCB124
VE0478
VE0477
CP1205
PCB123
REC SW PCB
VIEWFINDER
PCB360
VV0243
CD1501
TO DECK CHASSIS
MIC UNIT
EXT DC IN
J2501
BATTERY
CR2025
3.0V
SIDE OPERATION
PCB 122
VE0476
CP1203
CP1003
CP5003
CP4203
CP4204
CP4205
CD4203
CD4204
CD401
PCB271
MDA PCB
VV0244
CD2705
CP2705
CD2704
CP2704
CD2702
CP2702
CD2701
CP2701
CD2703
CP2703
CX2701
CY2701
CX2702
CY2702
PCB101
MAIN PCB
VM0023
CP2706
CP2707
CD2706
CD2707
D1101
Q1101
PCB430
VE0226
DECK 1
PCB500
VE0226
DECK 2
TO CAMERA SHIELD
CD7001
TO DECK
SENSOR PCB-A
SENSOR PCB-B
CN01
CN02
AF PCB
VIDEO LENS
FOCUS MOTOR
ZOOM MOTOR
IRIS MOTOR
P01
P02
P03
P04
CD8003
PCB801
CAMERA VIDEO PCB
VV0237
TEST CP8004
CP4201
CD8001
CP8001
CP4202
CD8002
CP8002
CX8001
CY7001
CX8002
CY7002
PCB701
SSG PCB
VV0236
CY7003
CX7003
CY7004
CX7004
SUB CAMERA PCB
PCB702 VV0236
AV OUTPUT
J4201
1 VIDEO OUT
2 GND
3 5V OUT
4 GND
5 N.C
6 AUDIO OUT
7 N.C
8 N.C
BACK OPERATION
PCB121
VE0475
CT1201
CX1001
CT1202
CX1002
TEST CP5005
CX4202
CY3002
CX4201
CY3001
PCB301
Y/C PCB
VV0245
TEST CP3003
CY4201
CX4101
PCB411
HEAD AMP PCB
VE0250
TEST CP4102
CP4101
VIDEO HEAD
CP5001
CD5001
H5002
FE
CP5002
CD5002
H5001
AE
R/P
CTL
CX7001
CT501
PCB501
DC-DC CONVERTER
VV0231

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

MECHANICAL EXPLODED VIEW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PCB122
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PCB501
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PCB801
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PCB702
PCB701
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IC7001
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PCB121
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PCB411
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PCB271
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PCB101
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PCB301
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PCB124
PCB123
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V401
PCB360
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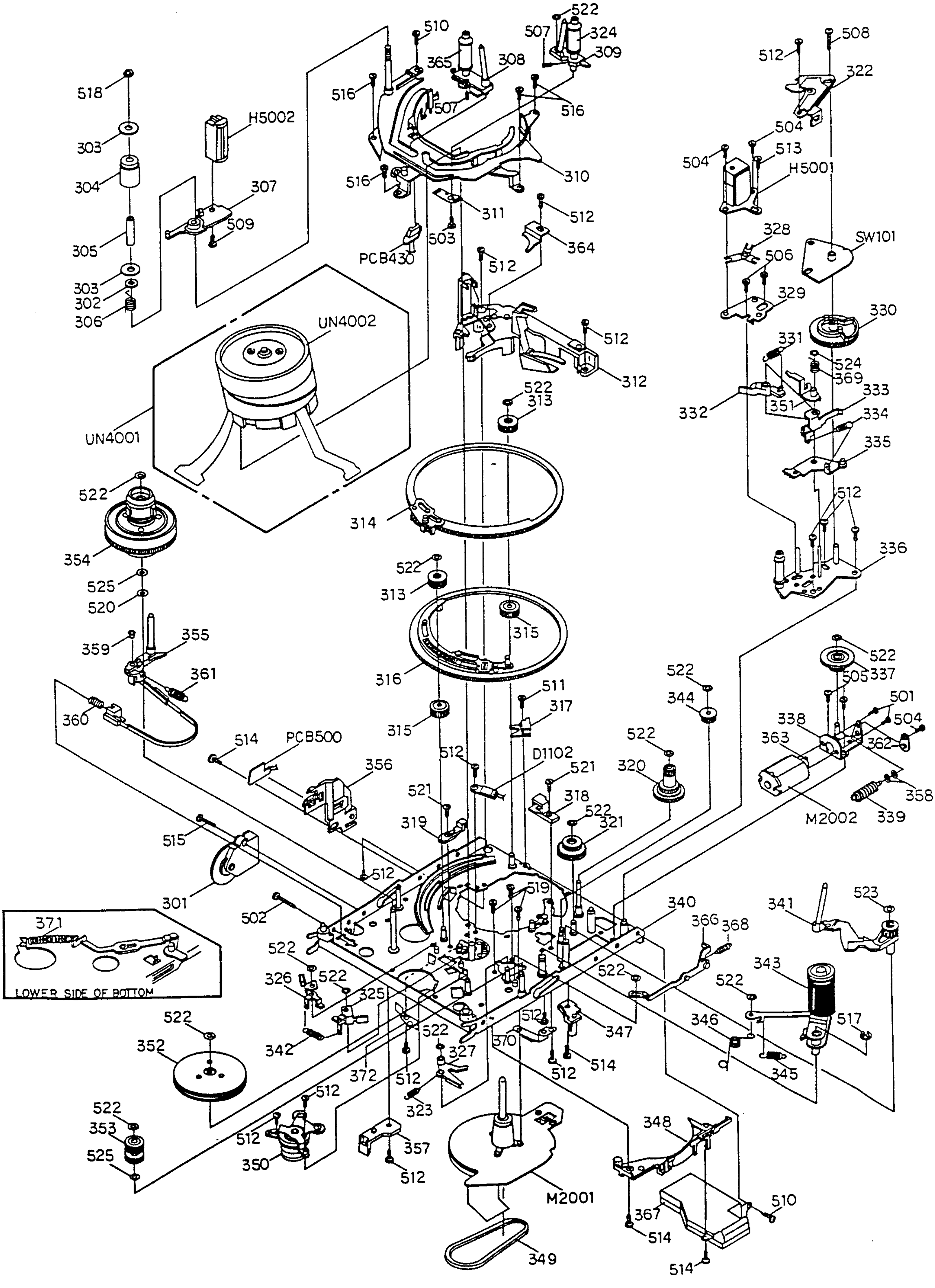
DECK EXPLODED VIEW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H5002
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H5001
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PCB430
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SW101
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UN4002
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UN4001
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PCB500
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D1102
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M2002
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LOWER SIDE OF BOTTOM
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M2001
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MECHANICAL REPLACEMENT PARTS LIST

REF.NO	PART NO	DESCRIPTION
601	706JPA0012	CAP.LENS
602	713JPA0139	HOOD.LENS
603	771JPD0059	COVER.AF
604	702JPJ0035	CABINET.SIDE
605	A45710A780	LID CASSETTE ASS'Y
	712JPJ0511	LID CASSETTE
	7230002638	SHEET.LID CASSETTE
	7230003874	PLATE.WINDOW
606	735JRA0028	RUBBER BUTTON SIDE OP.(B)
607	788JPA0003	POLYSLIDER WASHER 14*18*T0.5
608	850P000154	CASE HEAD AMP SHIELD
609	735JRA0007	RUBBER BUTTON.SIDE OP
610	A45701A650	STAGE ASS'Y
611	713JRA0004	RUBBER AF
612	A45710A810	DECK ASS'Y
613	800JR00039	CUSHION
614	713JPA0146	COVER BUTTON BATTERY
615	733JPA0062	KNOB.TRACKING
616	709JPG0003	VIDEO LENS LV315FA
617	752JSA0300	SHIELD.CASE
	755JDA0033	SHIELD.FILM
	759JNA0003	PVC PLATE.CCD
618	752JSA0301	SHIELD.COVER
619	752JSA0298	SHIELD.CASE
620	752JSA0303	SHIELD.COVER
621	756JPA0027	COVER.CCD
622	756JPA0024	HOLDER.CCD
623	890SV511B0	OPTICAL LOW PAS FILTER
624	800JRA0013	RUBBER CCD FILTER
625	761JAA0008	PLATE.CCD
626	752JSA0302	SHIELD.COVER
627	735JRA0010	RUBBER BUTTON.BACK OP.(B)
628	735JRD0036	RUBBER BUTTON.BACK OP.(A)
629	755JDA0046	SHIELD.FILM BACK OP.
630	713JPA0121	GLASS.LED
631	733JPA0054	KNOB.POWER
632	733JPA0055	KNOB.SPEED
633	712JPD0015	PANEL.BACK
634	A45710A770	CABINET.MAIN ASS'Y
	702JPJ0038	CABINET.MAIN
	7222021476	SHEET.RATING
	755JDA0036	EARTH SHEET.TRACKING
635	744JUB0003	SHOES.SPRING
636	762JAE0003	SHOES.FOOT
637	762JSA0074	BRACKET.SHOES FOOT
638	709JPB0004	MIC ASSY
639	733JPA0058	BUTTON.DATE
640	702JPA0427	PLATE.STAND
641	A45710A800	CABINET.BATTERY ASS'Y
	703JPB0003	BASE BATTERY
	755JDA0037	EARTH SHEET.BUTTON BATTERY
	773JUE0007	PLATE.CONTACT R.BATTERY(+)
	773JUE0008	PLATE.CONTACT R.BATTERY(-)
642	733JPA0060	BUTTON.ZOOM
643	738JPA0021	BASE.ZOOM
644	735JRA0009	RUBBER ZOOM
645	733JPA0059	BUTTON.REC
646	769JSA0009	METAL.BAND GRIP
647	738JPA0023	HOLDER BATTERY EJECT
648	733JPA0061	KNOB BATTERY EJECT
649	794JLA0032	BAND GRIP ASS'Y
650	703JPA0017	COVER BATTERY
651	794JLA0030	STRING.CAP LENS
652	A45710A370	VIEWFINDER ASS'Y
653	709JRA0002	EYE CAP
654	719JPA0009	EYE CAP HOLDER
655	719JPA0010	RING
656	719JPA0007	LENS CASE
657	713JNA0003	LENS
658	719JPA0008	LENS STOPPER
659	719JPA0006	LENS HOLDER
660	702JPA0459	TOP.CASE
661	702JPA0460	BOTTOM.CASE
	7240001011	SHEET.CAUTION(A)
	7240001012	SHEET.CAUTION(B)
662	709JRA0001	O-RING
663	744JUA0045	PLATE.SPRING
664	752JNA0012	INSULATION PLATE
665	769JUA0001	TILT PLATE
666	769JUA0002	TORQUE PLATE
667	789JPA0001	TILT AXIS
701	8102114404	SCREW.PAN M1.4*4
702	8140817204	SCREW.PAN 1.7*2
703	8102120402	SCREW.PAN M2*4
704	82B1432E51	SPRING.WASHER 1.4*3.2*T0.45
705	8102220804	SCREW.BIND M2*8
706	8109120204	SCREW.TAP TITE(B) PAN 2*2
707	8110120404	SCREW.TAP TITE(P) PAN 2*4
708	8110220504	SCREW.TAP TITE(P) BIND 2*5
709	8110320502	SCREW.TAP TITE(P) FLAT 2*5
710	8110320602	SCREW.TAPTITE(P) FLAT 2*6
711	8110120602	SCREW.TAP TITE(P) PAN 2*6
712	8110220A44	SCREW.TAP TITE(P) BIND 2*14
713	8117126A24	SCREW.TAPPING(BO) PAN 2.6*12
714	8140817602	CAMERA SCREW M1.7*6
715	8139817302	CAMERA SCREW M1.7*3
716	8140817802	CAMERA SCREW M1.7*8
717	8109117602	SCREW.TAP TITE(B) PAN 1.7*6
---	J4330128	WARNING SHEET
---	J4511102	GUARANTEE CARD
---	J4571001	INSTRUCTION BOOK
---	J4670120	DEW CAUTION SHEET
---	752JSA0305	SHIELD CASE
---	752JSA0306	SHIELD COVER
---	755JDA0030	SHEET.MAIN SHIELD COVER
---	755JDA0035	SHEET.PCB COVER
---	756JPA0017	HOLDER.SENSOR
---	771JPA0138	HOLDER.JACK
---	771JPA0156	HOLDER.BUTTON BATTERY
---	773JUA0005	PLATE.CONTACT BTN BATTERY(+)
---	773JUA0006	PLATE.CONTACT BTN BATTERY(-)
---	791JHA0091	LIGHTRON.BAG
---	792JHA0214	PACKAGE.TOP
---	792JHA0215	PACKAGE.BOTTOM
---	793JCD2284	GIFT BOX
---	794JPD0007	SHOULDER STRAP
---	797JCA0110	MASTER CARTON

DECK REPLACEMENT PARTS LIST

REF.NO	PART NO	DESCRIPTION	
301	850A900067	DAMPER ASS'Y	
302	850P600221	COLLAR.IMPEDANCE R.3	
303	850P600184	FLANGE.IMPEDANCE ROLLER	
304	850P600168	ROLLER.IMPEDANCE	
305	850P400223	SLEEVE.P1	
306	850P800100	SPRING.FE HEAD ARM	
307	850P500026	ARM.FE HEAD	
308	850A400053	S.INCLINED BASE ASS'Y	
309	850A400054	T.INCLINED BASE ASS'Y	
310	850A100007	LOADING RAIL ASS'Y	
311	850P400181	PLATE.T.INCLINED BASE	
312	850P600337	BASE.UV 2	
313	850P300083	GEAR.GUIDE S	
314	850A300023	S.RING ASS'Y	
315	850P300084	GEAR.GUIDE T.	
316	850A300024	T.RING ASS'Y	
317	850P000136	HOLDER.RING GEAR C	
318	850P000134	HOLDER.RING GEAR A	
319	850P000135	HOLDER.RING GEAR B	
320	850P600162	GEAR.TERMINAL	
321	850P300079	GEAR.LOADING A	
322	850P600338	UPPER.S.M.P	
323	850P800124	SPRING.SUB BRAKE 2	
324	850A400063	T-G ROLLER ASS'Y 2	
325	850A600077	MAIN BRAKE R ASS'Y	
326	850A600078	MAIN BRAKE L ASS'Y	
327	850A600079	ARM.SUB BRAKE ASS'Y	
328	850P800102	SPRING.AZIMUTH	
329	850P500028	BASE.AC HEAD 2	
330	850P600213	GEAR.CAM 2	
331	850P800126	SPRING.LOCK ARM 2	
332	850P600214	ARM.LOCK 2	
333	850P600215	LEVER.LOCK ARM 2	
334	850P800119	SPRING.FAN SHAPED	
335	850A600083	F-S.GEAR 2 ASS'Y	
336	850A600084	DECK PLATE 2 ASS'Y	
337	850P600161	GEAR.WORM WHEEL	
338	850A300025	LOADING M.BRACKET ASS'Y	
339	850A600058	WORM ASS'Y	
340	850A000042	MAIN CHASSIS 3 ASS.Y	
341	850A600081	MIDDLE POST ARM 2 ASS'Y	
342	850P800125	SPRING.MAIN BRAKE	
343	850A400058	PINCH ROLLER ARM 2 ASS'Y	
344	850P300080	GEAR.LOADING B	
345	850P800122	SPRING.PINCH ROLLER	
346	850P800106	SPRING.P-R ACTUATOR	
347	850P000153	HOLDER.HEAD AMP	
348	850P000151	COVER.MOTOR	
349	850P600170	BELT.CAPSTAN	
350	850A200015	C-PULLEY BRACKET 2 ASS'Y	
351	850A600082	LOCK ARM UPPER ASS'Y	
352	850A200016	T REEL GEAR 2 ASS'Y	
353	850P200065	GEAR.JOINT CASS.	
354	850A200031	SUPPLY REEL 3 ASS'Y	
355	850A400050	TENSION SERVO ASS'Y	
356	850P700029	HOLDER.END SENSOR	
357	850P000152	BRACKET M.D.A	
358	82Q102601G	LUMILAR.WASHER	
359	850P400151	CAP.TENSION ARM	
360	850P800104	SPRING.TENSION ADJUST	
361	850P800103	SPRING.TENSION ARM	
362	850P300088	BEARING.WORM	
363	850P600160	DRIVER.WORM	
364	850P600171	GUIDE.S.INCLINED	
365	850A400062	S-G ROLLER ASS'Y 2	
366	850A600080	SB ROD ASS'Y	
367	850P000155	LID.HEAD AMP SHIELD	
368	850P800123	SPRING.SUB BRAKE ROD	
369	850P800127	SPRING.LOCK ARM UPPER	
370	850AAA0016	EARTH PLATE ASS'Y	
371	850P800120	SPRING.ROD MAIN BRAKE	
372	850P000340	PLATE.CYL.CONNECTOR	
501	8139816201	CAMERA SCREW	M1.6*2.0 NI
502	8139817A02	CAMERA SCREW	M1.7*10 BK
503	8139817122	CAMERA SCREW	M1.7*1.2 BK
504	8140817252	CAMERA SCREW	M1.7*2.5 BK
505	8139817252	CAMERA SCREW	M1.7*2.5 BK
506	8139817282	CAMERA SCREW	M1.7*2.8 BK
507	813DJ12302	SET SCREW CUT POINT	M1.2*3.0 BK
508	8140817A02	CAMERA SCREW	M1.7*10 BK
509	8140816301	CAMERA SCREW	M1.6*3.0 NI
510	8140817202	CAMERA SCREW	M1.7*2.0 BK
511	8139817302	CAMERA SCREW	M1.7*3.0 BK
512	8140817302	CAMERA SCREW	M1.7*3.0 BK
513	8140817304	CAMERA SCREW	M1.7*3.0 BK
514	8140817402	CAMERA SCREW	M1.7*4.0 BK
515	8140817602	CAMERA SCREW	M1.7*6.0 BK
516	8139817254	CAMERA SCREW	M1.7*2.5 CH
517	83ETW25000	E-RING	2.5
518	8300220000	NUT	M2
519	8140416354	CAMERA SCREW OVAL	M1.6*3.5 CH
520	82Q1632C5N	POLYSLIDER WASHER	1.6*3.2*T0.25
521	8140817252	CAMERA SCREW	M1.7*2.5 BK
522	82P1230C5N	POLYSLIDER WASHER(CUT)	1.2*3.0*T0.25
523	82P264705N	POLYSLIDER WASHER(CUT)	2.6*4.7*T0.5
524	82P1732C5N	POLYSLIDER WASHER(CUT)	1.7*3.2*T0.25
525	82Q1632B3N	POLYSLIDER WASHER	1.6*3.2*T0.13
CD2703	068392006A	CORD EIS CONNECTOR	8392006A
CD2706	068392007A	CORD EIS CONNECTOR	8392007A
CD2707	068392008A	CORD EIS CONNECTOR	8392008A
CD5001	068392009A	CORD EIS CONNECTOR	8392009A
CD5002	068397002A	CORD EIS CONNECTOR	8397002A
D1101	0010500020	LED	TLN107A
D1102	DAK0000100	DEW SENSOR	HDP-06-A5
H5001	1523191009	HEAD.AUDIO CONTROL	C-4211-AC-3212
H5002	1543D04002	HEAD.FULL ERASE	HVFVA0014A
M2001	1510998014	CAPSTAN DD UNIT	DFX-46B2VWB
M2002	1596918001	MOTOR.LOADING	MIN-6GC04B
PCB430	A43401A430	DECK PCB ASS'Y	VE0228
PCB500	A43401A500	DECK PCB ASS'Y	VE0226
Q1101	000050002D	TRANSISTOR.PHOTO	TPS606-D
SW101	0520943003	SWITCH.ROTARY	SIM0320
UN4001	1590D00062	UNIT.CYLINDER	CYCA4P003A
UN4002	4000-5053	UPPER DRUM ASS'Y	

THIS ELECTRICAL PARTS LIST IS STANDARD PART LIST. BUT
INTERCHANGEABLE PARTS MAY BE USED IN THE UNIT.
SEE THE INTERCHANGEABLE PARTS LIST AFTER THE STANDARD PARTS LIST.

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PART NO	DESCRIPTION	
RESISTORS			
R1057	R00106393J	RC	39K OHM 1/6W
R2060	R00106472J	RC	4.7K OHM 1/6W
R2062	R00106472J	RC	4.7K OHM 1/6W
R3111	R001T6563J	RC	56K OHM 1/6W
R7160	R00106474J	RC	470K OHM 1/6W
CAPACITORS			
C522	E53701220M	CE	22 UF 10V
C2027	P23200224J	CMPL	0.22 UF 50V
C2529	E01101471M	CE	470 UF 10V
C2717	E01P01221M	CE	220 UF 10V
C5002	P61301103J	CMPL	0.01 UF 100V
C5041	P61500683J	CMPL	0.068 UF 50V
C5042	P13300562J	CP	0.0056 UF 50V
C5043	C020B0513K	CC	0.001 UF 500V
C7066	E01P00331M	CE	330 UF 6.3V
C7067	E01P01221M	CE	220 UF 10V
SEMICONDUCTORS			
D401	DD1RMA1520	DIODE.SILICON	MA152WA-(TX)
D501	D17R000920	DIODE.SILICON	RLS-92 TE-11
D502	D17R000920	DIODE.SILICON	RLS-92 TE-11
D503	DD3R0505CP	DIODE.SILICON	SB05-05CP-TA
D504	D17R000920	DIODE.SILICON	RLS-92 TE-11
D505	DD7RB110C0	DIODE.SILICON	RB110CT101
D1002	D97RB6R810	DIODE.ZENER	DTZ TT11 6.8
D1003	DD1RMA1100	DIODE.SILICON	MA110TX
D1004	DD1RMA1100	DIODE.SILICON	MA110TX
D1005	DD1RMA1100	DIODE.SILICON	MA110TX
D1006	D97RB6R21B	DIODE.ZENER	DTZ TT11 6.2B
D1007	DD1RMA1100	DIODE.SILICON	MA110TX
D1008	DD1RMA1100	DIODE.SILICON	MA110TX
D1009	DD1RMA1100	DIODE.SILICON	MA110TX
D1010	DD1RMA1100	DIODE.SILICON	MA110TX
D1201	0020124010	LED	LN1261C
D2001	DD1RMA1100	DIODE.SILICON	MA110TX
D2005	DD7RA204U0	DIODE.SILICON	DA204UT107
D2501	DD3RB2003P	DIODE.SILICON	SB20-03P-TD
D2502	DD3RB2003P	DIODE.SILICON	SB20-03P-TD
D2503	DD7RB110C0	DIODE.SILICON	RB110CT101
D2504	DD7RB110C0	DIODE.SILICON	RB110CT101
D2505	DD3RB2003P	DIODE.SILICON	SB20-03P-TD
D2506	DD1RMA1100	DIODE.SILICON	MA110TX
D3001	D97RB6R81A	DIODE.ZENER	DTZ TT11 6.8A
D3002	DD1RMA1100	DIODE.SILICON	MA110TX
D4101	DD1RMA1100	DIODE.SILICON	MA110TX
D4102	DD1RMA1100	DIODE.SILICON	MA110TX
D4103	DD1RMA1100	DIODE.SILICON	MA110TX
D4104	DD1RMA1100	DIODE.SILICON	MA110TX
D4201	DD7RN202U0	DIODE.SILICON	DAN202UT107
D4202	D97RB6R810	DIODE.ZENER	DTZ TT11 6.8
D5002	D97RB6R818	DIODE.ZENER	DTZ TT11 6.8B
D5003	DD1RMA1100	DIODE.SILICON	MA110TX
D7001	DD1RMA1100	DIODE.SILICON	MA110TX
D7002	DD1RMA1100	DIODE.SILICON	MA110TX
D7003	DD1R007280	DIODE.SILICON	MA728-(TX)
D7004	DD1RMA1100	DIODE.SILICON	MA110TX
D7005	DD1RMA1100	DIODE.SILICON	MA110TX
D7006	DD1RMA1100	DIODE.SILICON	MA110TX
D7007	DD1RMA1100	DIODE.SILICON	MA110TX
D7008	DD3R020300	DIODE.SILICON	SB02-03Q-TR
D7009	DD1R007280	DIODE.SILICON	MA728-(TX)
D7010	DD1RMA1100	DIODE.SILICON	MA110TX
D7011	DD1RMA1100	DIODE.SILICON	MA110TX
D7012	DD1RMA1100	DIODE.SILICON	MA110TX
D7013	DD1RMA1100	DIODE.SILICON	MA110TX
D8002	DD1RMA1100	DIODE.SILICON	MA110TX
IC401	107FD71490	IC	BA7149F-T1
IC501	100F037750	IC	MB3775PF-G-BND-TF
IC1001	105F57291F	IC	TA7291F(EL)
IC1002	154F50031C	IC	OEC0031C
IC1003	152F06451A	IC	UPD6451AGT-101-T1
IC1004	15HF08052A	IC	S-8052ALO-LG-X
IC1005	10UF01028B	IC	MM1028BFF
IC1006	15HF01252H	IC	S-81252HG-RL-T1
IC2001	191F48026A	IC	OEC8026
IC2002	107F00324A	IC	BA10324AF-T1
IC2003	107F00393F	IC	BA10393F
IC2004	155F0WU04F	IC	TC7WU04F(TE12L)
IC2501	100F037750	IC	MB3775PF-G-BND-TF
IC2701	101F03890F	IC	AN3890FBS
IC2702	105F03702F	IC	TD62M3702F(TP1)
IC2703	107F06456F	IC	BA6456FS-T1

REF.NO	PART NO	DESCRIPTION	
SEMICONDUCTORS (CONT)			
IC3001	104F08185F	IC	HA118185F
IC3002	155F07403M	IC	MSM7403MS-KR4
IC3003	101F03580S	IC	AN3580SB-T1
IC3005	107F56309F	IC	BA6309F-T1
IC4101	104F08167F	IC	HA118167F
IC4201	103F01830M	IC	LB1830M-TP-T1
IC5001	107F65114F	IC	BA5114F
IC5002	105F77361F	IC	TA7361AF-TP1
IC7001	191D03725F	IC	MN3725FE
IC7002	151F03110S	IC	MN3110S
IC7004	181F051790	IC	MN5179
IC7005	181F051070	IC	MN5107
IC7006	10GF03P810	IC	IR3P81
IC7007	10GF03P970	IC	IR3P97
IC7008	155F07S04F	IC	TC7S04F(TE85L)
IC7009	151F03820S	IC	MN3820S-T1
IC7010	155F0053AF	IC	TC74HC4053AF(TP1)
IC8001	154F08118M	IC	HA118118MA-EL
IC8002	102F08181D	IC	MC-8181D
IC8003	10GF03P820	IC	IR3P82
IC8004	103F06324N	IC	LA6324NM-TP-T1
IC8005	157F04052B	IC	BU4052BF-T1
Q401	T65B011636	TRANSISTOR.SILICON	2SA1163-BL
⚠ Q402	T97B018982	TRANSISTOR.SILICON	2SD1898T101R
Q501	TP7TA07001	COMPOUND TRANSISTOR	DTA143EUT107
Q502	TN7MH07001	COMPOUND TRANSISTOR	DTC144WU
Q503	TA3T017070	TRANSISTOR.SWITCHING	2SA1707(S.T)
Q504	TR7A0FMY10	TRANSISTOR.ARRAY	FMY1 T149
Q505	TR7A0FMY10	TRANSISTOR.ARRAY	FMY1 T149
Q506	TA3T017070	TRANSISTOR.SWITCHING	2SA1707(S.T)
Q1001	TP7TD07001	COMPOUND TRANSISTOR	DTA144EUT107
Q1002	T67A015770	TRANSISTOR.SILICON	2SA1577T107
Q1003	TN7TD07001	COMPOUND TRANSISTOR	DTC144EUT107
Q1004	TN7TD07001	COMPOUND TRANSISTOR	DTC144EUT107
Q1005	T67A015760	TRANSISTOR.SILICON	2SA1576T107
Q1006	T67A015760	TRANSISTOR.SILICON	2SA1576T107
Q2001	TS7M000001	COMPOUND.TRANSISTOR(IC)	IMX1T110
Q2002	TS7M000001	COMPOUND.TRANSISTOR(IC)	IMX1T110
Q2003	TN7MJ07001	COMPOUND TRANSISTOR	DTC114TUT107
Q2501	T73A011230	TRANSISTOR.SILICON	2SB1123
Q2502	TN7TD07001	COMPOUND TRANSISTOR	DTC144EUT107
Q2503	TP7MJ07001	COMPOUND TRANSISTOR	DTA114TUT107
Q2504	TN7MJ07001	COMPOUND TRANSISTOR	DTC114TUT107
Q2505	TP7TA07001	COMPOUND TRANSISTOR	DTA143EUT107
Q2506	TN7TD07001	COMPOUND TRANSISTOR	DTC144EUT107
Q2507	T77A011880	TRANSISTOR.SILICON	2SB1188T101
Q2508	T77A011880	TRANSISTOR.SILICON	2SB1188T101
Q2509	TN7TD07001	COMPOUND TRANSISTOR	DTC144EUT107
Q2510	T67A015760	TRANSISTOR.SILICON	2SA1576T107
Q2511	T93T018010	TRANSISTOR.SILICON	2SD180
Q2513	T87A040810	TRANSISTOR.SILICON	2SC4081T107
Q2514	T67A015760	TRANSISTOR.SILICON	2SA1576T107
Q2515	T67A015770	TRANSISTOR.SILICON	2SA1577T107
Q2701	0002G00120	PHOTO COUPLER	GP2S09BC
Q2702	0002G00120	PHOTO COUPLER	GP2S09BC
Q3001	T83A042110	TRANSISTOR.SILICON	2SC4211
Q3002	T83A042110	TRANSISTOR.SILICON	2SC4211
Q3003	T83A042110	TRANSISTOR.SILICON	2SC4211
Q3004	T83A042110	TRANSISTOR.SILICON	2SC4211
Q3005	TN7TA07001	COMPOUND TRANSISTOR	DTC143EUT107
Q3006	TN7TB07001	COMPOUND TRANSISTOR	DTC114EUT107
Q3007	T83A042110	TRANSISTOR.SILICON	2SC4211
Q3008	T63A016220	TRANSISTOR.SILICON	2SA1622
Q3009	T83A042110	TRANSISTOR.SILICON	2SC4211
Q3010	T83A042110	TRANSISTOR.SILICON	2SC4211
Q3011	T63A016220	TRANSISTOR.SILICON	2SA1622
Q3012	T63A016220	TRANSISTOR.SILICON	2SA1622
Q3014	TN7TD07001	COMPOUND TRANSISTOR	DTC144EUT107
Q3016	T83A042110	TRANSISTOR.SILICON	2SC4211
Q3017	TN7TD07001	COMPOUND TRANSISTOR	DTC144EUT107
Q3018	TN7MJ07001	COMPOUND TRANSISTOR	DTC114TUT107
Q4101	TR7A0FMW10	TRANSISTOR.ARRAY	FMW1T99
Q4102	TR7A0FMW10	TRANSISTOR.ARRAY	FMW1T99
Q4103	T83A042110	TRANSISTOR.SILICON	2SC4211
Q4104	T63A016220	TRANSISTOR.SILICON	2SA1622
Q4201	TN7TC07001	COMPOUND TRANSISTOR	DTC124EUT107
Q4211	TP7TA07001	COMPOUND TRANSISTOR	DTA143EUT107
Q5001	TN7TB07001	COMPOUND TRANSISTOR	DTC114EUT107
Q5002	T87A040970	TRANSISTOR.SILICON	2SC4097T107
Q5003	TN7TB07001	COMPOUND TRANSISTOR	DTC114EUT107
Q5006	TN7TB07001	COMPOUND TRANSISTOR	DTC114EUT107
Q5007	T87A040970	TRANSISTOR.SILICON	2SC4097T107
Q5008	T67A015770	TRANSISTOR.SILICON	2SA1577T107

ELECTRICAL REPLACEMENT PARTS LIST

SEMICONDUCTORS (CONT)

REF.NO	PART NO	DESCRIPTION
Q5009	TN7TC07001	COMPOUND TRANSISTOR DTC124EUT107
Q5010	T87A040810	TRANSISTOR.SILICON 2SC4081T107
Q7001	T81T046550	TRANSISTOR.SILICON 2SC4655-(TX)
Q7002	T91T022160	TRANSISTOR.SILICON 2SD2216-(TX)
Q7003	T91T022160	TRANSISTOR.SILICON 2SD2216-(TX)
Q7006	T67T017740	TRANSISTOR.SILICON 2SA1774 TL
Q7007	T67T017740	TRANSISTOR.SILICON 2SA1774 TL
Q7008	T67T017740	TRANSISTOR.SILICON 2SA1774 TL
Q7009	TR7A0UMX10	TRANSISTOR.ARRAY UMX1 TR
Q7010	TR7A0UMX10	TRANSISTOR.ARRAY UMX1 TR
Q7011	TR7A0UMX10	TRANSISTOR.ARRAY UMX1 TR
Q7012	T61T018060	TRANSISTOR.SILICON 2SA1806-(TX)
Q7013	T81T046910	TRANSISTOR.SILICON 2SC4691-(TX)
Q7014	T61T018060	TRANSISTOR.SILICON 2SA1806-(TX)
Q7015	T81T046910	TRANSISTOR.SILICON 2SC4691-(TX)
Q7016	T87T046170	TRANSISTOR.SILICON 2SC4617 TL
Q7017	T87T046170	TRANSISTOR.SILICON 2SC4617 TL
Q7018	T87T046170	TRANSISTOR.SILICON 2SC4617 TL
Q7019	T87T046170	TRANSISTOR.SILICON 2SC4617 TL
Q8001	TR7A0UMX10	TRANSISTOR.ARRAY UMX1 TR
Q8002	TR7A0UMZ10	TRANSISTOR.ARRAY UMZ1 TR
Q8003	T87T046170	TRANSISTOR.SILICON 2SC4617 TL
Q8004	T87T046170	TRANSISTOR.SILICON 2SC4617 TL
Q8005	TR7A0UMZ10	TRANSISTOR.ARRAY UMZ1 TR

COILS & TRANSFORMERS

REF.NO	PART NO	DESCRIPTION
L401	022100022A	COIL.LINEARITY ELH-5L238N
L402	02118A101K	COIL 100 UH
L501	021868220K	COIL 22 UH
L502	02167B151K	COIL 150 UH
L503	021868470K	COIL 47 UH
L504	021868470K	COIL 47 UH
L505	021868151K	COIL 150 UH
L1001	021AM1221K	COIL 220 UH
L1002	021BS1390K	COIL 39 UH
L2501	021868470K	COIL 47 UH
L2502	021868330K	COIL 33 UH
L2503	021868470K	COIL 47 UH
L2504	021868470K	COIL 47 UH
L2505	021868330K	COIL 33 UH
L2506	021868330K	COIL 33 UH
L2507	021868330K	COIL 33 UH
L2508	02186F680K	COIL 68 UH
L2509	021AM1220K	COIL 22 UH
L2510	021AM1220K	COIL 22 UH
L3001	021BS1100K	COIL 10 UH
L3003	021BS1150K	COIL 15 UH
L3005	021BS1100K	COIL 10 UH
L3006	021AM1101K	COIL 100 UH
L3007	0216S2121K	COIL 120 UH
L3008	021AM1101K	COIL 100 UH
L3009	021AM1101K	COIL 100 UH
L3011	021BS1180K	COIL 18 UH
L3012	021AM1101K	COIL 100 UH
L3013	021AM1101K	COIL 100 UH
L3014	021BS1120K	COIL 12 UH
L3015	021BS1100K	COIL 10 UH
L3017	021BS1390K	COIL 39 UH
L3018	021BS1180K	COIL 18 UH
L3019	021AM1101K	COIL 100 UH
L3020	021BS1390K	COIL 39 UH
L3021	021WS1562K	COIL 5.6 MH
L3022	021BS1470K	COIL 47 UH
L4101	021BS1221K	COIL 220 UH
L4102	021BS1221K	COIL 220 UH
L4103	021BS1221K	COIL 220 UH
L4104	021BS1221K	COIL 220 UH
L4105	021AM1220K	COIL 22 UH
L4106	021AM1220K	COIL 22 UH
L4107	021BS1100K	COIL 10 UH
L4108	0216S2181K	COIL 180 UH
L4201	021AM1220K	COIL 22 UH
L4202	021AM6010M	COIL 1.0 UH
L4204	021AM6010M	COIL 1.0 UH
L5001	021WS1562K	COIL 5.6 MH
L5002	021AM1101K	COIL 100 UH
L5003	021AM1221K	COIL 220 UH
L5004	021AM1221K	COIL 220 UH
L7001	021AM6220K	COIL 22 UH
L7002	021AM6220K	COIL 22 UH
L7003	021AM6220K	COIL 22 UH
L7004	021AM6220K	COIL 22 UH
L7005	021AM6220K	COIL 22 UH
L7006	021AM1220K	COIL 22 UH

COILS & TRANSFORMERS (CONT)

REF.NO	PART NO	DESCRIPTION
L7007	021AM6220K	COIL 22 UH
L7008	021AM1220K	COIL 22 UH
L7009	021AM6220K	COIL 22 UH
L7010	021AM1220K	COIL 22 UH
L7011	021AM1220K	COIL 22 UH
L7012	021AM1220K	COIL 22 UH
L7014	021AM6220K	COIL 22 UH
L8001	021AM6220K	COIL 22 UH
L8002	021AM1220K	COIL 22 UH
L8005	021AM6220K	COIL 22 UH
L8007	021AM1220K	COIL 22 UH
⚠ T501	048103012J	TRANSFORMER.SWITCHING 8103012J
T5001	031C11S01R	COIL.BIAS OSC 1C11S01R
T5002	031C11S02R	COIL.BIAS OSC 1C11S02R

JACKS

REF.NO	PART NO	DESCRIPTION
⚠ J401	0666050002	SOCKET.CRT CVT 2906-5501
⚠ J2501	0602602005	JACK.DC HEC3610-010010
J4201	0622780003	JACK.DIN TCS7308-01-201

SWITCHES

REF.NO	PART NO	DESCRIPTION
SW401	06AJ200330	CONNE. PCB SIDE IMSA-9210B-1-03-T
SW1001	0504101C02	SWITCH.TACT EVQ-QFU 02K
SW1002	0504101C02	SWITCH.TACT EVQ-QFU 02K
SW1210	0510221A02	SWITCH.SLIDE SSSS22612A
SW1211	0510221A03	SWITCH.SLIDE SSST01087A
SW1219	0504201018	SWITCH.TACT SKHHBT005A
SW2701	0552111003	SWITCH.MICRO MSS-10L2-1
SW2702	0550A11015	SWITCH.LEAF MTS10290MPH0

VARIABLE RESISTORS

REF.NO	PART NO	DESCRIPTION
VR401	V11C3Q4BM5	VR.SEMIFIXED EVM 1SS X50 BQ4
VR402	V11C3Q2BM5	VR.SEMIFIXED EVM 1SS X50 BQ2
VR403	V12B216BM1	VR.SEMIFIXED RH0422C16J
VR404	V11B2L6BM1	VR.SEMIFIXED EVM LSG A00 BY6
VR2001	V1JC3E5BM3	VR.SEMIFIXED CVR-32A-154SW2
VR2002	V1JC3H5BM3	VR.SEMIFIXED CVR-32A-224SW2
VR2003	V025025B02	VR.ROTARY RK08H11100AU
VR2502	V1JC314BM3	VR.SEMIFIXED CVR-32A-103SW2
VR3001	V1JC3H4BM3	VR.SEMIFIXED CVR-32A-223SW2
VR3002	V1JC3L4BM3	VR.SEMIFIXED CVR-32A-333SW2
VR3003	V1JC3H4BM3	VR.SEMIFIXED CVR-32A-223SW2
VR3004	V1JC314BM3	VR.SEMIFIXED CVR-32A-103SW2
VR3005	V1JC3H4BM3	VR.SEMIFIXED CVR-32A-223SW2
VR3006	V1JC314BM3	VR.SEMIFIXED CVR-32A-103SW2
VR3007	V1JC3H3BM3	VR.SEMIFIXED CVR-32A-222SW2
VR5001	V1JC3H4BM3	VR.SEMIFIXED CVR-32A-223SW2
VR5002	V1JC3H4BM3	VR.SEMIFIXED CVR-32A-223SW2
VR7001	V11C315BM5	VR.SEMIFIXED EVM 1SS X50 B15
VR7002	V11C3H3BM5	VR.SEMIFIXED EVM 1SS X50 BE3
VR7003	V11C3H3BM5	VR.SEMIFIXED EVM 1SS X50 BE3
VR7004	V11C3H5BM5	VR.SEMIFIXED EVM 1SS X50 BE5
VR7005	V11C3H4BM5	VR.SEMIFIXED EVM 1SS X50 BE4
VR7006	V11C3H4BM5	VR.SEMIFIXED EVM 1SS X50 BE4
VR7007	V11C3H4BM5	VR.SEMIFIXED EVM 1SS X50 BE4
VR7008	V11C3H4BM5	VR.SEMIFIXED EVM 1SS X50 BE4
VR7009	V11C3H4BM5	VR.SEMIFIXED EVM 1SS X50 BE4
VR7010	V11C3Q3BM5	VR.SEMIFIXED EVM 1SS X50 BQ3
VR7011	V11C3H4BM5	VR.SEMIFIXED EVM 1SS X50 BE4
VR7012	V11C3Q4BM5	VR.SEMIFIXED EVM 1SS X50 BQ4
VR7013	V11C3Q4BM5	VR.SEMIFIXED EVM 1SS X50 BQ4
VR7014	V11C314BM5	VR.SEMIFIXED EVM 1SS X50 B14
VR7015	V11C3H3BM5	VR.SEMIFIXED EVM 1SS X50 BE3
VR7016	V11C3H3BM5	VR.SEMIFIXED EVM 1SS X50 BE3
VR7017	V11C3H3BM5	VR.SEMIFIXED EVM 1SS X50 BE3
VR7018	V11C314BM5	VR.SEMIFIXED EVM 1SS X50 B14
VR7019	V11C314BM5	VR.SEMIFIXED EVM 1SS X50 B14
VR8001	V11C3H3BM5	VR.SEMIFIXED EVM 1SS X50 BE3
VR8002	V11C314BM5	VR.SEMIFIXED EVM 1SS X50 B14
VR8003	V11C314BM5	VR.SEMIFIXED EVM 1SS X50 B14
VR8004	V11C314BM5	VR.SEMIFIXED EVM 1SS X50 B14
VR8005	V11C314BM5	VR.SEMIFIXED EVM 1SS X50 B14
VR8006	V11C3Q4BM5	VR.SEMIFIXED EVM 1SS X50 BQ4
VR8007	V11C3H4BM5	VR.SEMIFIXED EVM 1SS X50 BE4
VR8008	V11C3H4BM5	VR.SEMIFIXED EVM 1SS X50 BE4
VR8009	V11C3Q4BM5	VR.SEMIFIXED EVM 1SS X50 BQ4
VR8011	V11C3H4BM5	VR.SEMIFIXED EVM 1SS X50 BE4

P.C. BOARD ASSEMBLIES

REF.NO	PART NO	DESCRIPTION
PCB101	A45710A01A	PCB ASS'Y VM0023
PCB121	A45710A27A	PCB ASS'Y VE0475
PCB122	A45710A28A	PCB ASS'Y VE0476
PCB123	A45710A21A	PCB ASS'Y VE0477

ELECTRICAL REPLACEMENT PARTS LIST

P.C. BOARD ASSEMBLIES (CONT)

REF.NO	PART NO	DESCRIPTION
PCB124	A45710A18A	PCB ASS'Y VE0478
PCB271	A45710A15A	PCB ASS'Y VV0244
PCB301	A45710A30A	PCB ASS'Y VV0245
PCB360	A45710A36A	PCB ASS'Y VV0243
PCB411	A45711A33A	PCB ASS'Y VV0250
PCB430	A43401A430	SEE DECK REPLACEMENT PARTS LIST
PCB500	A43401A500	SEE DECK REPLACEMENT PARTS LIST
PCB501	A45710A25A	PCB ASS'Y VV0231
PCB701	A45710A12A	PCB ASS'Y VV0236
PCB702	A45710A31A	PCB ASS'Y VV0238
PCB801	A45710A13A	PCB ASS'Y VV0237

MISCELLANEOUS

REF.NO	PART NO	DESCRIPTION
AD8001	0415030221	AC ADAPTOR LSSQ0047
B2501	024A8407C2	CORE.BEADS BL02RN2-R62
B2502	024A8407C2	CORE.BEADS BL02RN2-R62
⚠ BT8001	1413300018	BATTERY.NICAD
BT8002	1411109002	BATTERY CR2025-1BON
CD401	068395007A	CORD.CONNECTOR 8395007A
CP402	069Q740128	CONNECTOR PCB SIDE CHP1504-0101
CP403	069Q940169	CONNECTOR PCB SIDE CGP1604-0101
CP405	126P000025	TERMINAL PIN RT-01T-1R0B
CP406	069J220330	CONNECTOR PCB SIDE IMSA-9215H-T
CY501	069R9A0010	CONNECTOR PCB SIDE 53020-1010
CD1205	068122028A	COAD.EIS CONNECTOR 8122028A
CD1501	068301328A	CORD.CONNECTOR 8301328A
CD2705	068394009A	CORD.EIS CONNECTOR 8394009A
CD4203	068393007A	CORD.EIS CONNECTOR 8393007A
CD4204	068125038A	COAD.EIS CONNECTOR 8125038A
CD7001	068101333A	CORD.EIS CONNECTOR 810333A
CD8001	068OT15001	CORD.CONNECTOR P21P01-08P10
CD8002	0682TB0001	CORD.CONNECTER JXP4717-010010
CD8003	068399002A	CORD.EIS CONNECTOR 8399002A
CD8004	122B081302	CORD.JUMPER 2B081302
CD8005	122B0A1402	CORD.JUMPER 2B0A1402
CD8006	122B0C1402	CORD.JUMPER 2B0C1402
CP1003	069R280219	CONNECTOR PCB SIDE 52030-0820
CP1203	069R280239	CONNECTOR PCB SIDE 52042-0830
CP1205	069H220011	CONNECTOR PCB SIDE IL-S-2P-S2L2-EF
CP2701	069R2F0239	CONNECTOR PCB SIDE 52042-1530
CP2702	069R2E0239	CONNECTOR PCB SIDE 52042-1430
CP2703	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP2704	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP2705	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP2706	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP2707	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP3003	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP4101	069R280219	CONNECTOR PCB SIDE 52030-0820
CP4102	0693920039	CONNECTOR PCB SIDE S2B-ZR
CP4201	069R2A0219	CONNECTOR PCB SIDE 52030-1020
CP4202	069R2C0219	CONNECTOR PCB SIDE 52030-1220
CP4203	0693930049	CONNECTOR PCB SIDE B3B-ZR
CP4204	0694250129	CONNECTOR PCB SIDE 173981-5
CP4205	0693950049	CONNECTOR PCB SIDE B5B-ZR
CP5001	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP5002	0693970039	CONNECTOR PCB SIDE S7B-ZR
CP5003	0693920039	CONNECTOR PCB SIDE S2B-ZR
CP5005	0693950049	CONNECTOR PCB SIDE B5B-ZR
CP8001	069R2A0219	CONNECTOR PCB SIDE 52030-1020
CP8002	069R2C0219	CONNECTOR PCB SIDE 52030-1220
CP8004	0693920049	CONNECTOR PCB SIDE B2B-ZR
CT8001	1401530001	TAPE.VIDEO CASSETTE EC30
CUS011	800JF00166	CUSHION-A
CUS121	800JF00166	CUSHION-A
CUS131	800JF00166	CUSHION-A
CUS151	800JF00166	CUSHION-A
CUS301	800JF00166	CUSHION-A
CUS331	800JF00166	CUSHION-A
CX1001	069R760050	CONNECTOR PCB SIDE 52198-0617
CX1002	069R760050	CONNECTOR PCB SIDE 52198-0617
CX2701	069H9D0030	CONNECTOR PCB SIDE IL-WY-16P-D15T
CX2702	069H9D0030	CONNECTOR PCB SIDE IL-WY-16P-D15T
CX4101	069H9D0030	CONNECTOR PCB SIDE IL-WY-16P-D15T
CX4201	069R9A0109	CONNECTOR PCB SIDE 53073-1010
CX4202	069R9E0109	CONNECTOR PCB SIDE 53073-1410
CX7001	069R9A0099	CONNECTOR PCB SIDE 52022-1010
CX7003	0694740011	CONNECTOR PCB SIDE 174633-4
CX7004	0694740011	CONNECTOR PCB SIDE 174633-4
CX8001	069R9D0010	CONNECTOR PCB SIDE 53020-1610
CX8002	069R9D0010	CONNECTOR PCB SIDE 53020-1610
CY1201	069R760060	CONNECTOR PCB SIDE 53136-0610
CY1202	069R760060	CONNECTOR PCB SIDE 53136-0610
CY2701	069H9C0020	CONNE. PCB SIDE IL-WY-16S-D15T-S1
CY2702	069H9C0020	CONNE. PCB SIDE IL-WY-16S-D15T-S1
CY3001	069R9A0099	CONNECTOR PCB SIDE 52022-1010
CY3002	069R9E0099	CONNECTOR PCB SIDE 52022-1410

MISCELLANEOUS (CONT)

REF.NO	PART NO	DESCRIPTION
CY4201	069H9C0020	CONNE. PCB SIDE IL-WY-16S-D15T-S1
CY7001	069R9G0099	CONNECTOR PCB SIDE 52022-1610
CY7002	069R9G0099	CONNECTOR PCB SIDE 52022-1610
CY7003	0694740021	CONNECTOR PCB SIDE 3-174642-4
CY7004	0694740021	CONNECTOR PCB SIDE 3-174642-4
DL3001	104A24R438	DELAY LINE GLASS ADL-SE2444R
⚠ F121	084E340001	IC PROTECTOR PRF-4000-F003
⚠ F252	084700R801	IC PROTECTOR ICP-F20
⚠ F253	08470R2501	IC PROTECTOR ICP-N5
⚠ F254	084700R401	IC PROTECTOR ICP-F10
⚠ F255	084700R601	IC PROTECTOR CP-F15
⚠ F256	084700R601	IC PROTECTOR CP-F15
⚠ F257	084700R801	IC PROTECTOR ICP-F20
⚠ F258	084700R401	IC PROTECTOR ICP-F10
⚠ FB401	04200R6011	TRANSFORMER.FLYBACK ETF-08L20A
⚠ ICP401	0847T0R402	IC PROTECTOR ICP-N10T104
PF2001	113228T002	RC COMPOUND AFZR72YM38A1
PF3001	1147T127T2	FILTER.TRAP 47T127T2
PF3002	1147H145T1	FILTER.HIGH PASS 47H145T1
PF3003	1147L336T2	FILTER.LOW PASS 47L336T2
PF5001	114DL123T2	FILTER.LOW PASS 4DL123T2
PF7001	1147L406T2	FILTER.LOW PASS 47L406T2
PF7002	103803R6T1	DELAY 3803R6T1
PF7003	1147L166T4	FILTER.LOW PASS 47L166T4
PF7004	1147L166T4	FILTER.LOW PASS 47L166T4
PF7005	1147L166T4	FILTER.LOW PASS 47L166T4
PF7009	1162LTH3S1	FILTER.EMI NFM41R10C222T1
PF7010	1162LTH3S1	FILTER.EMI NFM41R10C222T1
PF8001	1147B446TD	FILTER.BAND PASS 47B446TD
PF8002	103801R5T2	DELAY 3801R5T2
PF8003	103801R5T2	DELAY 3801R5T2
PF8004	103801R5T2	DELAY 3801R5T2
TH401	DSK07G501K	THERMISTOR 112501-2
TC1001	0100114M01	C.CERAMIC TRIMER ECR-JA030E12X
TC7001	0100112M01	C.CERAMIC TRIMER ECR-JA020E12X
⚠ V401	09810R6801	B/W PICTURE TUBE M01KKX07WB50
X1001	100632R801	CRYSTAL DSVT-200 32.768KHZ
X1002	1003T4R003	CERAMIC OSCILLATOR KBR-4.0MWSTR
X3001	1006F4R302	CRYSTAL HC-49/U 443361875HZ
X7001	100C19R301	CRYSTAL HC-49/U-S19.3125

RESISTOR
RC........CARBON RESISTOR

CAPACITORS
CC........CERAMIC CAPACITOR
CE........ALUMI ELECTROLYTIC CAPACITOR
CP........POLYESTER CAPACITOR
CPP.......POLYPROPYLENE CAPACITOR
CPL.......PLASTIC CAPACITOR
CMP.......METAL POLYESTER CAPACITOR
CMPL......METAL PLASTIC CAPACITOR
CMPP......METAL POLYPROPYLENE CAPACITOR
CST.......STYROL CAPACITOR

INTERCHANGEABLE PARTS LIST

NOTE:THE FOLLOWING PART(S) MAY BE SUBSTITUTED FOR PARTS INDICATED IN THE BASIC PART(S) LIST (WITH THE SAME REF.NO.). THESE PARTS SHARE THE SAME ELECTRICAL CHARACTERISTICS AND OTHER ELEMENTS FOR COMMON USAGE.
EITHER PART NUMBER MAY BE USED IN THIS UNIT.

REF.NO	DESCRIPTION (PART NO)	DESCRIPTION (PART NO)
VR7001	EVM 1SS X50 B15 (V11C315BM5)	CVR-32A-104SW2 (V1JC315BM3)
VR7002	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR7003	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR7004	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3) CVR-32A-224SW2 (V1JC3H5BM3)
VR7005	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7006	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7007	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7008	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7009	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7010	EVM 1SS X50 BQ3 (V11C3Q3BM5)	CVR-32A-472SW2 (V1JC3Q3BM3)
VR7011	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7012	EVM 1SS X50 BQ4 (V11C3Q4BM5)	CVR-32A-473SW2 (V1JC3Q4BM3)
VR7013	EVM 1SS X50 BQ4 (V11C3Q4BM5)	CVR-32A-473SW2 (V1JC3Q4BM3)
VR7014	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR7015	EVM 1SS X50 BE3 (V11C3H3BM5)	CVR-32A-222SW2 (V1JC3H3BM3)
VR7016	EVM 1SS X50 BE3 (V11C3H3BM5)	CVR-32A-222SW2 (V1JC3H3BM3)
VR7017	EVM 1SS X50 BE3 (V11C3H3BM5)	CVR-32A-222SW2 (V1JC3H3BM3)
VR7018	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR7019	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8001	EVM 1SS X50 BE3 (V11C3H3BM5)	CVR-32A-222SW2 (V1JC3H3BM3)
VR8002	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8003	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8004	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8005	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8006	EVM 1SS X50 BQ4 (V11C3Q4BM5)	CVR-32A-473SW2 (V1JC3Q4BM3)
VR8007	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR8008	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR8009	EVM 1SS X50 BQ4 (V11C3Q4BM5)	CVR-32A-473SW2 (V1JC3Q4BM3)
VR8011	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PART NO	DESCRIPTION
P.C. BOARD ASSEMBLIES (CONT)		
PCB124	A45710A18A	PCB ASS'Y VE0478
PCB271	A45710A15A	PCB ASS'Y VV0244
PCB301	A45710A30A	PCB ASS'Y VV0245
PCB360	A45710A36A	PCB ASS'Y VV0243
PCB411	A45711A33A	PCB ASS'Y VV0250
PCB430	A43401A430	SEE DECK REPLACEMENT PARTS LIST
PCB500	A43401A500	SEE DECK REPLACEMENT PARTS LIST
PCB501	A45710A25A	PCB ASS'Y VV0231
PCB701	A45710A12A	PCB ASS'Y VV0236
PCB702	A45710A31A	PCB ASS'Y VV0238
PCB801	A45710A13A	PCB ASS'Y VV0237
MISCELLANEOUS		
AD8001	0415030221	AC ADAPTOR LSSQ0047
B2501	024A8407C2	CORE.BEADS BL02RN2-R62
B2502	024A8407C2	CORE.BEADS BL02RN2-R62
⚠ BT8001	1413300018	BATTERY.NICAD
BT8002	1411109002	BATTERY CR2025-1BON
CD401	068395007A	CORD.CONNECTOR 8395007A
CP402	069Q740128	CONNECTOR PCB SIDE CHP1504-0101
CP403	069Q940169	CONNECTOR PCB SIDE CGP1604-0101
CP405	126P000025	TERMINAL PIN RT-01T-1R0B
CP406	069J220330	CONNECTOR PCB SIDE IMSA-9215H-T
CY501	069R9A0010	CONNECTOR PCB SIDE 53020-1010
CD1205	068122028A	COAD.EIS CONNECTOR 8122028A
CD1501	068301328A	CORD.CONNECTOR 8301328A
CD2705	068394009A	CORD.EIS CONNECTOR 8394009A
CD4203	068393007A	CORD.EIS CONNECTOR 8393007A
CD4204	068125038A	COAD.EIS CONNECTOR 8125038A
CD7001	068101333A	CORD.EIS CONNECTOR 810333A
CD8001	0680T15001	CORD.CONNECTOR P21P01-08P10
CD8002	0682TB0001	CORD.CONNECTER JXP4717-010010
CD8003	068399002A	CORD.EIS CONNECTOR 8399002A
CD8004	122B081302	CORD.JUMPER 2B081302
CD8005	122B0A1402	CORD.JUMPER 2B0A1402
CD8006	122B0C1402	CORD.JUMPER 2B0C1402
CP1003	069R280219	CONNECTOR PCB SIDE 52030-0820
CP1203	069R280239	CONNECTOR PCB SIDE 52042-0830
CP1205	069H220011	CONNECTOR PCB SIDE IL-S-2P-S2L2-EF
CP2701	069R2F0239	CONNECTOR PCB SIDE 52042-1530
CP2702	069R2E0239	CONNECTOR PCB SIDE 52042-1430
CP2703	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP2704	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP2705	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP2706	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP2707	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP3003	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP4101	069R280219	CONNECTOR PCB SIDE 52030-0820
CP4102	0693920039	CONNECTOR PCB SIDE S2B-ZR
CP4201	069R2A0219	CONNECTOR PCB SIDE 52030-1020
CP4202	069R2C0219	CONNECTOR PCB SIDE 52030-1220
CP4203	0693930049	CONNECTOR PCB SIDE B3B-ZR
CP4204	0694250129	CONNECTOR PCB SIDE 173981-5
CP4205	0693950049	CONNECTOR PCB SIDE B5B-ZR
CP5001	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP5002	0693970039	CONNECTOR PCB SIDE S7B-ZR
CP5003	0693920039	CONNECTOR PCB SIDE S2B-ZR
CP5005	0693950049	CONNECTOR PCB SIDE B5B-ZR
CP8001	069R2A0219	CONNECTOR PCB SIDE 52030-1020
CP8002	069R2C0219	CONNECTOR PCB SIDE 52030-1220
CP8004	0693920049	CONNECTOR PCB SIDE B2B-ZR
CT8001	1401530001	TAPE.VIDEO CASSETTE EC30
CUS011	800JF00166	CUSHION-A
CUS121	800JF00166	CUSHION-A
CUS131	800JF00166	CUSHION-A
CUS151	800JF00166	CUSHION-A
CUS301	800JF00166	CUSHION-A
CUS331	800JF00166	CUSHION-A
CX1001	069R760050	CONNECTOR PCB SIDE 52198-0617
CX1002	069R760050	CONNECTOR PCB SIDE 52198-0617
CX2701	069H9D0030	CONNECTOR PCB SIDE IL-WY-16P-D15T
CX2702	069H9D0030	CONNECTOR PCB SIDE IL-WY-16P-D15T
CX4101	069H9D0030	CONNECTOR PCB SIDE IL-WY-16P-D15T
CX4201	069R9A0109	CONNECTOR PCB SIDE 53073-1010
CX4202	069R9E0109	CONNECTOR PCB SIDE 53073-1410
CX7001	069R9A0099	CONNECTOR PCB SIDE 52022-1010
CX7003	0694740011	CONNECTOR PCB SIDE 174633-4
CX7004	0694740011	CONNECTOR PCB SIDE 174633-4
CX8001	069R9D0010	CONNECTOR PCB SIDE 53020-1610
CX8002	069R9D0010	CONNECTOR PCB SIDE 53020-1610
CY1201	069R760060	CONNECTOR PCB SIDE 53136-0610
CY1202	069R760060	CONNECTOR PCB SIDE 53136-0610
CY2701	069H9C0020	CONNE. PCB SIDE IL-WY-16S-D15T-S1
CY2702	069H9C0020	CONNE. PCB SIDE IL-WY-16S-D15T-S1
CY3001	069R9A0099	CONNECTOR PCB SIDE 52022-1010
CY3002	069R9E0099	CONNECTOR PCB SIDE 52022-1410

REF.NO	PART NO	DESCRIPTION
MISCELLANEOUS (CONT)		
CY4201	069H9C0020	CONNE. PCB SIDE IL-WY-16S-D15T-S1
CY7001	069R9G0099	CONNECTOR PCB SIDE 52022-1610
CY7002	069R9G0099	CONNECTOR PCB SIDE 52022-1610
CY7003	0694740021	CONNECTOR PCB SIDE 3-174642-4
CY7004	0694740021	CONNECTOR PCB SIDE 3-174642-4
DL3001	104A24R438	DELAY LINE GLASS ADL-SE2444R
⚠ F121	084E340001	IC PROTECTOR PRF-4000-F003
⚠ F252	084700R801	IC PROTECTOR ICP-F20
⚠ F253	08470R2501	IC PROTECTOR ICP-N5
⚠ F254	084700R401	IC PROTECTOR ICP-F10
⚠ F255	084700R601	IC PROTECTOR CP-F15
⚠ F256	084700R601	IC PROTECTOR CP-F15
⚠ F257	084700R801	IC PROTECTOR ICP-F20
⚠ F258	084700R401	IC PROTECTOR ICP-F10
⚠ FB401	04200R6011	TRANSFORMER.FLYBACK ETF-08L20A
⚠ ICP401	0847T0R402	IC PROTECTOR ICP-N10T104
PF2001	113228T002	RC COMPOUND AFZR72YM38A1
PF3001	1147T127T2	FILTER.TRAP 47T127T2
PF3002	1147H145T1	FILTER.HIGH PASS 47H145T1
PF3003	1147L336T2	FILTER.LOW PASS 47L336T2
PF5001	114DL123T2	FILTER.LOW PASS 4DL123T2
PF7001	1147L406T2	FILTER.LOW PASS 47L406T2
PF7002	103803R6T1	DELAY 3803R6T1
PF7003	1147L166T4	FILTER.LOW PASS 47L166T4
PF7004	1147L166T4	FILTER.LOW PASS 47L166T4
PF7005	1147L166T4	FILTER.LOW PASS 47L166T4
PF7009	1162LTH3S1	FILTER.EMI NFM41R10C222T1
PF7010	1162LTH3S1	FILTER.EMI NFM41R10C222T1
PF8001	1147B446TD	FILTER.BAND PASS 47B446TD
PF8002	103801R5T2	DELAY 3801R5T2
PF8003	103801R5T2	DELAY 3801R5T2
PF8004	103801R5T2	DELAY 3801R5T2
TH401	DSK07G501K	THERMISTOR 112501-2
TC1001	0100114M01	C.CERAMIC TRIMER ECR-JA030E12X
TC7001	0100112M01	C.CERAMIC TRIMER ECR-JA020E12X
⚠ V401	09810R6801	B/W PICTURE TUBE M01KKX07WB50
X1001	100632R801	CRYSTAL DSVT-200 32.768KHZ
X1002	1003T4R003	CERAMIC OSCILLATOR KBR-4.0MWSTR
X3001	1006F4R302	CRYSTAL HC-49/U 443361875HZ
X7001	100C19R301	CRYSTAL HC-49/U-S19.3125

RESISTOR
RC........CARBON RESISTOR

CAPACITORS
CC........CERAMIC CAPACITOR
CE........ALUMI ELECTROLYTIC CAPACITOR
CP........POLYESTER CAPACITOR
CPP.......POLYPROPYLENE CAPACITOR
CPL.......PLASTIC CAPACITOR
CMP.......METAL POLYESTER CAPACITOR
CMPL......METAL PLASTIC CAPACITOR
CMPP......METAL POLYPROPYLENE CAPACITOR
CST.......STYROL CAPACITOR

INTERCHANGEABLE PARTS LIST

NOTE:THE FOLLOWING PART(S) MAY BE SUBSTITUTED FOR PARTS INDICATED IN THE BASIC PART(S) LIST (WITH THE SAME REF.NO.). THESE PARTS SHARE THE SAME ELECTRICAL CHARACTERISTICS AND OTHER ELEMENTS FOR COMMON USAGE.
EITHER PART NUMBER MAY BE USED IN THIS UNIT.

REF.NO	DESCRIPTION (PART NO)	DESCRIPTION (PART NO)
VR7001	EVM 1SS X50 B15 (V11C315BM5)	CVR-32A-104SW2 (V1JC315BM3)
VR7002	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR7003	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR7004	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3) CVR-32A-224SW2 (V1JC3H5BM3)
VR7005	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7006	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7007	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7008	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7009	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7010	EVM 1SS X50 BQ3 (V11C3Q3BM5)	CVR-32A-472SW2 (V1JC3Q3BM3)
VR7011	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7012	EVM 1SS X50 BQ4 (V11C3Q4BM5)	CVR-32A-473SW2 (V1JC3Q4BM3)
VR7013	EVM 1SS X50 BQ4 (V11C3Q4BM5)	CVR-32A-473SW2 (V1JC3Q4BM3)
VR7014	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR7015	EVM 1SS X50 BE3 (V11C3H3BM5)	CVR-32A-222SW2 (V1JC3H3BM3)
VR7016	EVM 1SS X50 BE3 (V11C3H3BM5)	CVR-32A-222SW2 (V1JC3H3BM3)
VR7017	EVM 1SS X50 BE3 (V11C3H3BM5)	CVR-32A-222SW2 (V1JC3H3BM3)
VR7018	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR7019	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8001	EVM 1SS X50 BE3 (V11C3H3BM5)	CVR-32A-222SW2 (V1JC3H3BM3)
VR8002	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8003	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8004	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8005	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8006	EVM 1SS X50 BQ4 (V11C3Q4BM5)	CVR-32A-473SW2 (V1JC3Q4BM3)
VR8007	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR8008	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR8009	EVM 1SS X50 BQ4 (V11C3Q4BM5)	CVR-32A-473SW2 (V1JC3Q4BM3)
VR8011	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PART NO	DESCRIPTION
P.C. BOARD ASSEMBLIES (CONT)		
PCB124	A45710A18A	PCB ASS'Y VE0478
PCB271	A45710A15A	PCB ASS'Y VV0244
PCB301	A45710A30A	PCB ASS'Y VV0245
PCB360	A45710A36A	PCB ASS'Y VV0243
PCB411	A45711A33A	PCB ASS'Y VV0250
PCB430	A43401A430	SEE DECK REPLACEMENT PARTS LIST
PCB500	A43401A500	SEE DECK REPLACEMENT PARTS LIST
PCB501	A45710A25A	PCB ASS'Y VV0231
PCB701	A45710A12A	PCB ASS'Y VV0236
PCB702	A45710A31A	PCB ASS'Y VV0238
PCB801	A45710A13A	PCB ASS'Y VV0237
MISCELLANEOUS		
AD8001	0415030221	AC ADAPTOR LSSQ0047
B2501	024A8407C2	CORE.BEADS BL02RN2-R62
B2502	024A8407C2	CORE.BEADS BL02RN2-R62
⚠ BT8001	1413300018	BATTERY.NICAD
BT8002	1411109002	BATTERY CR2025-1BON
CD401	068395007A	CORD.CONNECTOR 8395007A
CP402	069Q740128	CONNECTOR PCB SIDE CHP1504-0101
CP403	069Q940169	CONNECTOR PCB SIDE CGP1604-0101
CP405	126P000025	TERMINAL PIN RT-01T-1R0B
CP406	069J220330	CONNECTOR PCB SIDE IMSA-9215H-T
CY501	069R9A0010	CONNECTOR PCB SIDE 53020-1010
CD1205	068122028A	COAD.EIS CONNECTOR 8122028A
CD1501	068301328A	CORD.CONNECTOR 8301328A
CD2705	068394009A	CORD.EIS CONNECTOR 8394009A
CD4203	068393007A	CORD.EIS CONNECTOR 8393007A
CD4204	068125038A	COAD.EIS CONNECTOR 8125038A
CD7001	068101333A	CORD.EIS CONNECTOR 810333A
CD8001	068OT15001	CORD.CONNECTOR P21P01-08P10
CD8002	0682TB0001	CORD.CONNECTER JXP4717-010010
CD8003	068399002A	CORD.EIS CONNECTOR 8399002A
CD8004	122B081302	CORD.JUMPER 2B081302
CD8005	122B0A1402	CORD.JUMPER 2B0A1402
CD8006	122B0C1402	CORD.JUMPER 2B0C1402
CP1003	069R280219	CONNECTOR PCB SIDE 52030-0820
CP1203	069R280239	CONNECTOR PCB SIDE 52042-0830
CP1205	069H220011	CONNECTOR PCB SIDE IL-S-2P-S2L2-EF
CP2701	069R2F0239	CONNECTOR PCB SIDE 52042-1530
CP2702	069R2E0239	CONNECTOR PCB SIDE 52042-1430
CP2703	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP2704	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP2705	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP2706	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP2707	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP3003	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP4101	069R280219	CONNECTOR PCB SIDE 52030-0820
CP4102	0693920039	CONNECTOR PCB SIDE S2B-ZR
CP4201	069R2A0219	CONNECTOR PCB SIDE 52030-1020
CP4202	069R2C0219	CONNECTOR PCB SIDE 52030-1220
CP4203	0693930049	CONNECTOR PCB SIDE B3B-ZR
CP4204	0694250129	CONNECTOR PCB SIDE 173981-5
CP4205	0693950049	CONNECTOR PCB SIDE B5B-ZR
CP5001	0693920049	CONNECTOR PCB SIDE B2B-ZR
CP5002	0693970039	CONNECTOR PCB SIDE S7B-ZR
CP5003	0693920039	CONNECTOR PCB SIDE S2B-ZR
CP5005	0693950049	CONNECTOR PCB SIDE B5B-ZR
CP8001	069R2A0219	CONNECTOR PCB SIDE 52030-1020
CP8002	069R2C0219	CONNECTOR PCB SIDE 52030-1220
CP8004	0693920049	CONNECTOR PCB SIDE B2B-ZR
CT8001	1401530001	TAPE.VIDEO CASSETTE EC30
CUS011	800JF00166	CUSHION-A
CUS121	800JF00166	CUSHION-A
CUS131	800JF00166	CUSHION-A
CUS151	800JF00166	CUSHION-A
CUS301	800JF00166	CUSHION-A
CUS331	800JF00166	CUSHION-A
CX1001	069R760050	CONNECTOR PCB SIDE 52198-0617
CX1002	069R760050	CONNECTOR PCB SIDE 52198-0617
CX2701	069H9D0030	CONNECTOR PCB SIDE IL-WY-16P-D15T
CX2702	069H9D0030	CONNECTOR PCB SIDE IL-WY-16P-D15T
CX4101	069H9D0030	CONNECTOR PCB SIDE IL-WY-16P-D15T
CX4201	069R9A0109	CONNECTOR PCB SIDE 53073-1010
CX4202	069R9E0109	CONNECTOR PCB SIDE 53073-1410
CX7001	069R9A0099	CONNECTOR PCB SIDE 52022-1010
CX7003	0694740011	CONNECTOR PCB SIDE 174633-4
CX7004	0694740011	CONNECTOR PCB SIDE 174633-4
CX8001	069R9D0010	CONNECTOR PCB SIDE 53020-1610
CX8002	069R9D0010	CONNECTOR PCB SIDE 53020-1610
CY1201	069R760060	CONNECTOR PCB SIDE 53136-0610
CY1202	069R760060	CONNECTOR PCB SIDE 53136-0610
CY2701	069H9C0020	CONNE. PCB SIDE IL-WY-16S-D15T-S1
CY2702	069H9C0020	CONNE. PCB SIDE IL-WY-16S-D15T-S1
CY3001	069R9A0099	CONNECTOR PCB SIDE 52022-1010
CY3002	069R9E0099	CONNECTOR PCB SIDE 52022-1410

REF.NO	PART NO	DESCRIPTION
MISCELLANEOUS (CONT)		
CY4201	069H9C0020	CONNE. PCB SIDE IL-WY-16S-D15T-S1
CY7001	069R9G0099	CONNECTOR PCB SIDE 52022-1610
CY7002	069R9G0099	CONNECTOR PCB SIDE 52022-1610
CY7003	0694740021	CONNECTOR PCB SIDE 3-174642-4
CY7004	0694740021	CONNECTOR PCB SIDE 3-174642-4
DL3001	104A24R438	DELAY LINE GLASS ADL-SE2444R
⚠ F121	084E340001	IC PROTECTOR PRF-4000-F003
⚠ F252	084700R801	IC PROTECTOR ICP-F20
⚠ F253	08470R2501	IC PROTECTOR ICP-N5
⚠ F254	084700R401	IC PROTECTOR ICP-F10
⚠ F255	084700R601	IC PROTECTOR CP-F15
⚠ F256	084700R601	IC PROTECTOR CP-F15
⚠ F257	084700R801	IC PROTECTOR ICP-F20
⚠ F258	084700R401	IC PROTECTOR ICP-F10
⚠ FB401	04200R6011	TRANSFORMER.FLYBACK ETF-08L20A
⚠ ICP401	0847T0R402	IC PROTECTOR ICP-N10T104
PF2001	113228T002	RC COMPOUND AFZR72YM38A1
PF3001	1147T127T2	FILTER.TRAP 47T127T2
PF3002	1147H145T1	FILTER.HIGH PASS 47H145T1
PF3003	1147L336T2	FILTER.LOW PASS 47L336T2
PF5001	114DL123T2	FILTER.LOW PASS 4DL123T2
PF7001	1147L406T2	FILTER.LOW PASS 47L406T2
PF7002	103803R6T1	DELAY 3803R6T1
PF7003	1147L166T4	FILTER.LOW PASS 47L166T4
PF7004	1147L166T4	FILTER.LOW PASS 47L166T4
PF7005	1147L166T4	FILTER.LOW PASS 47L166T4
PF7009	1162LTH3S1	FILTER.EMI NFM41R10C222T1
PF7010	1162LTH3S1	FILTER.EMI NFM41R10C222T1
PF8001	1147B446TD	FILTER.BAND PASS 47B446TD
PF8002	103801R5T2	DELAY 3801R5T2
PF8003	103801R5T2	DELAY 3801R5T2
PF8004	103801R5T2	DELAY 3801R5T2
TH401	DSK07G501K	THERMISTOR 112501-2
TC1001	0100114M01	C.CERAMIC TRIMER ECR-JA030E12X
TC7001	0100112M01	C.CERAMIC TRIMER ECR-JA020E12X
⚠ V401	09810R6801	B/W PICTURE TUBE M01KKX07WB50
X1001	100632R801	CRYSTAL DSVT-200 32.768KHZ
X1002	1003T4R003	CERAMIC OSCILLATOR KBR-4.0MWSTR
X3001	1006F4R302	CRYSTAL HC-49/U 443361875HZ
X7001	100C19R301	CRYSTAL HC-49/U-S19.3125

RESISTOR
RC........CARBON RESISTOR

CAPACITORS
CC........CERAMIC CAPACITOR
CE........ALUMI ELECTROLYTIC CAPACITOR
CP........POLYESTER CAPACITOR
CPP.......POLYPROPYLENE CAPACITOR
CPL.......PLASTIC CAPACITOR
CMP.......METAL POLYESTER CAPACITOR
CMPL......METAL PLASTIC CAPACITOR
CMPP......METAL POLYPROPYLENE CAPACITOR
CST.......STYROL CAPACITOR

INTERCHANGEABLE PARTS LIST

NOTE:THE FOLLOWING PART(S) MAY BE SUBSTITUTED FOR PARTS INDICATED IN THE BASIC PART(S) LIST (WITH THE SAME REF.NO.). THESE PARTS SHARE THE SAME ELECTRICAL CHARACTERISTICS AND OTHER ELEMENTS FOR COMMON USAGE.
EITHER PART NUMBER MAY BE USED IN THIS UNIT.

REF.NO	DESCRIPTION (PART NO)	DESCRIPTION (PART NO)
VR7001	EVM 1SS X50 B15 (V11C315BM5)	CVR-32A-104SW2 (V1JC315BM3)
VR7002	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR7003	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR7004	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3) CVR-32A-224SW2 (V1JC3H5BM3)
VR7005	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7006	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7007	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7008	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7009	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7010	EVM 1SS X50 BQ3 (V11C3Q3BM5)	CVR-32A-472SW2 (V1JC3Q3BM3)
VR7011	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR7012	EVM 1SS X50 BQ4 (V11C3Q4BM5)	CVR-32A-473SW2 (V1JC3Q4BM3)
VR7013	EVM 1SS X50 BQ4 (V11C3Q4BM5)	CVR-32A-473SW2 (V1JC3Q4BM3)
VR7014	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR7015	EVM 1SS X50 BE3 (V11C3H3BM5)	CVR-32A-222SW2 (V1JC3H3BM3)
VR7016	EVM 1SS X50 BE3 (V11C3H3BM5)	CVR-32A-222SW2 (V1JC3H3BM3)
VR7017	EVM 1SS X50 BE3 (V11C3H3BM5)	CVR-32A-222SW2 (V1JC3H3BM3)
VR7018	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR7019	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8001	EVM 1SS X50 BE3 (V11C3H3BM5)	CVR-32A-222SW2 (V1JC3H3BM3)
VR8002	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8003	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8004	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8005	EVM 1SS X50 B14 (V11C314BM5)	CVR-32A-103SW2 (V1JC314BM3)
VR8006	EVM 1SS X50 BQ4 (V11C3Q4BM5)	CVR-32A-473SW2 (V1JC3Q4BM3)
VR8007	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR8008	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)
VR8009	EVM 1SS X50 BQ4 (V11C3Q4BM5)	CVR-32A-473SW2 (V1JC3Q4BM3)
VR8011	EVM 1SS X50 BE4 (V11C3H4BM5)	CVR-32A-223SW2 (V1JC3H4BM3)